

W. S. Featherston

THE rivers run over golden sands,
and over the golden sands run
rivers of gold into golden lands.

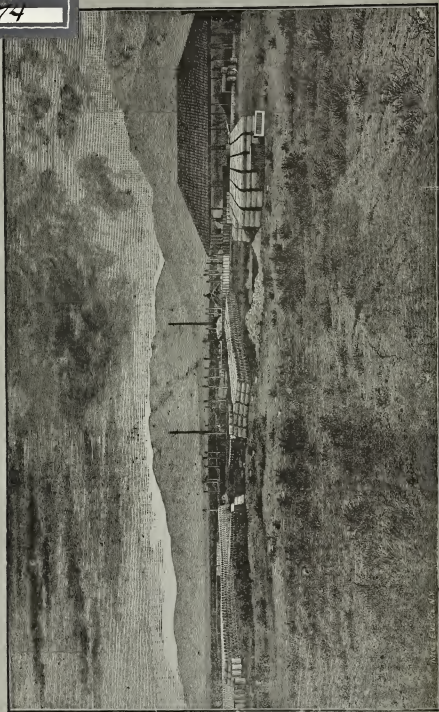
AT **ONTARIO** CAL.
WATER FOR IRRIGATING IS DELIVERED IN PIPES TO THE HIGHEST CORNER OF EACH TEN-ACRE LOT READY FOR USE.
IF YOU ARE SATISFIED WITH YOUR PRESENT HOME, HEALTH AND BUSINESS, DO NOT READ THIS PAMPHLET.

NO other Agricultural Colony or enterprise in the United States has such a large amount of cement and iron pipe in use for irrigating purposes as Ontario.

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N. W. Stowell's Pipe Works at Ontario, where the Cement Pipe used in the Ontario Irrigating System is Manufactured.

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ONTARIO.

Health in Southern California.

BY DR. J. P. WIDNEY.

[From the Los Angeles HERALD, Dec. 18, 1884.]

In an article first published in the *California* for November, 1880, and which has been frequently republished, I then spoke of the climatic belt.

"Along the base of the Sierra back of Pasadena, and on eastward, back of San Gabriel, above Pomona, past Cucamonga with its vined vineyards, and on beyond San Bernardino, growing warmer as it recedes inland from the sea, is a belt of foothills above the fog-line, facing out towards the noonday sun, looking down across the plains and the hills of the Coast Range upon the warm southern sea, and yet fauved daily by an ocean breeze that has no harshness. I do not say that there is no more perfect climate than this belt affords, but I have never seen one."

The mesa lying midway in this belt at the mouth of the San Antonio Cañon, back of Ontario, possesses many features which make it exceptionally favorable for the purposes of a health resort, even when contrasted with the other portions. Among these may be mentioned:

1st—A more equable temperature than either the eastern or the western extremity. This is a result of its medium distance from the sea, the ocean breeze being more tempered than at the western extremity, while the summer heat is more moderate than at the eastern extremity.

2d—An entire exemption from the northers, which at times touch slightly upon many other portions of the belt. The great elevation of Cucamonga peak, back of the mesa, deflects the northerly current off eastward through the Cajon Pass.

3d—The mesa here forms a natural backbone between the plains sloping eastward to the Santa Ana river and westward to the San Gabriel: while the great incline of the plain facing off southward towards the sun reaches an elevation of over 2000 feet before merging into the mountain chain. The effect of this contour and elevation in deflecting local wind currents is well marked.

4th—This high sloping divide, formed in the course of ages by the washing of the San Antonio Cañon, reaches almost across the valley at this point, forcing the Santa Ana river, with its low lands, its wind currents, its night vapors and fog-lines, many miles away.

5th—A perfect under-drainage is afforded

to the mesa by the coarse substratum of gravel and boulders from the washing of the cañon, while the surface drainage is equally good from the warm sandy soil of the evenly sloping plain.

6th—The abundant and unfailing supply of pure, soft, running water from the San Antonio creek.

7th—The varied and beautiful scenery of plain, mesa, cañon and mountain, with proximity to fine hunting and fishing grounds, thus affording diversion and healthful exercise to invalids.

8th—Nearness to the pine forests of the San Antonio Cañon and mountain slopes, where invalids may camp amid the balsamic odors. Many persons suffering from asthmatic, tuberculous and other troubles now camp each year about the cañon with much benefit. The great value of the locality as a health resort is yearly becoming more evident.

The mesa lying at the east side of the mouth of the cañon should be reserved as a location for a sanitarium, while the sloping bench which leads back along the side of the creek ought to be laid out in lots for a village site where invalids might live in detached cottages.

The suggestion of Dr. WIDNEY in the foregoing article to use the location referred to for a health and pleasure resort, is deemed so valuable that the company has decided to act upon it. Instead of devoting that piece of land to ordinary horticultural purposes, where only a few families could receive the benefit, the tract will be laid off for a pleasure park in which will be erected in time a large and fine hotel structure. Adjoining this will be laid off acre lots for residences which will be sold by the Company. Water in iron pipes will be furnished for domestic use. Alternate lots will be sold at three hundred dollars each, the others will be sold at four hundred dollars each during the next six months. This is one of the most romantic and picturesque locations in California and will undoubtedly become a famous resort.

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Ent. local history #1561

ONTARIO.

Its History, Description, and Resources.—Its Public and Private Improvements.—Its Water Supply and Educational Advantages.—Its Euclid Avenue and Shade Trees.—Its Attractiveness for Health, Pleasure and Profit. — Valuable Information for those seeking Homes in Southern California.

PREPARED BY R. M. WIDNEY.
LOS ANGELES, CAL.

RIVERSIDE:
PRESS AND HORTICULTURIST STEAM PRINTING HOUSE,
1884.

ONTARIO.

The Future Value of Land.

Will the high prices toward which land is advancing be permanent? Will they continue to pay interest rates on high figures? Will not the markets be over-supplied?

The answer to these questions brings us to a paradox. Yes and no.

The destiny of the race is food, clothing and education. As the population of the world increases the labor of each person is directed to producing a sustenance. In China, India, and other densely populated districts the result of the labor of the individual is his living. Very few in the older civilizations go beyond this. This living is best obtained from the soil. When this dense population comes upon this section, as it will come upon all the earth in time, then the man who has a ten-acre farm can from its products feed, clothe and educate his family. That is, by carefully cultivating the soil by the square foot, and raising thereon the food his own family consumes, and raising textile products for clothing, and using his family's labor working up the raw material into merchantable articles for sale at low prices, he will feed, clothe and educate his family. When such a time is reached land will bear a higher price than ever. No sum of money can produce the necessities of life, and he who has land from which he supports his family would exchange it for no small sum of money. Therefore for the purpose of sustaining life land will not be too high. For the purpose of raising products for market and repurchasing the necessities of life it may not pay.

ONTARIO, San Bernardino County, Cal.

The gem owes much to its setting.

Each locality on the globe partakes largely of the general characteristics of the country in which it is.

Ontario cannot be fully pictured with the pen as it was, is and will be without first filling in the background with sketches of California generally.

The early mariners who gazed upon the brown landscape of valleys, mesas and mountains saw nothing desirable, and sailed away to other lands in search of gold and health and cereal riches.

The rivers ran over golden sands. The mountains had built into their foundations the shining yellow ore. The gold hunters came and climbed every mountain, prospected every ravine, river, creek and hill, and camped on every plain on the Pacific Slope from the burning south to the cold north. They said the land was only fit for gold, that it was unhealthy, barren and unproductive. When the gold was gone they disappeared from the fields that to them were void of further use. They saw not the transmutation of the products of the soil into gold.

The rivers run over golden sands, and over the golden sands run rivers of gold, into golden lands. The agriculturist and horticulturist came and by handling the elements as nature intended that they should be handled they attained results in rapid growth, luxuriant products and prolific yield that were marvelous. The land that was supposed to be worthless was demonstrated to be of the most productive quality.



ORANGE ORCHARD, SAN ANTONIO CANYON, WITH "OLD BALDY" IN BACKGROUND.

Onto the dry plains and mesas man turned the streams of water, and through the products of the soil turned the water into gold. The dream of the alchemist became a fact. In every stream in California golden waters flow over the golden sands.

The agricultural experience of a score of years has thrown a flood of light and knowledge upon the value of soils, localities, methods and products. While the whole State can excel in everything as compared with other States, yet it has been found that each locality is a specialty in some things and productive in all.

Now no one, except the inexperienced, thinks of blindly venturing into the cultivation of the soil with promiscuous products. Localities are selected with a view to the products to be cultivated.

THE SELECTION OF ONTARIO.

Messrs. George and Win. B. Chaffey, formerly of Ontario, Canada, came to this land of developing and undeveloped wonders and settled at Riverside, San Bernardino county, and gave their time, money and thought to the problems of this new land. After a number of years experience in practical husbandry, they became aware of the facts above stated and at once set about the selection of a locality, if such were to be found, where the maximum results could be attained from the soil. It was no easy task. It involved the selection of suitable land, in suitable climate, in a good commercial position, with abundance of good water.

On the southern slope of the Sierra Madre mountains, where San Bernardino county joins Los Angeles county, bounded on the south by the steel rails of the Southern Pacific transcontinental railroad, watered by the clear waters of the San Antonio canyon, which come leaping down from the perpetual snows of the mountain peaks, free from frost, with a soft, rich, mealy soil, a hundred feet deep, is Ontario. We will not at this time give a detailed theoretical statement of the productive merits of the place, for in the subsequent pages will appear the more valuable evidence of what has actually been done. It is sufficient to say that the Chaffey Brothers se-

lected this place as having the greatest number of desirable elements and the fewest objectionable ones.

The warm sun from a clear, semi-tropical sky pouring its rich rays upon the mountain sides and peaks of the Sierra Madre Mountains, covered with eternal snows, sends down the canyons a crystal stream filled with life, health, pleasure and wealth. The beautiful rides in its pine forests are rich with the charms of the primeval groves.

The invalid whose lungs are panting for the pure air of the high mountain altitudes, free from dust and irritating impurities, can here find all that he desires in health assistance, blended with the grand and beautiful in nature's mountain scenery, far, far above the pines in snows that fell ages ago on these mountain heights.

A PLAN NECESSARY.

The most of the colony enterprises in this and other States have been permanently injured in the defective plan adopted in the origin of the work. To take a piece of land and sell it out quickly at a low price and bring together an inharmonious settlement with no concurrence of public action or improvement is one thing (and not a desirable thing either). To take a tract of land, and mature a plan that will work out the greatest common and individual benefit is quite another.

After land is sold in small tracts to many persons they can never be united in common expenses for the general good beyond a very limited extent. There is only one practical way, and that is for the first owners and organizers to carry out a line of improvements that will be for the community good and add the cost thereof to the price of the land. Those who wish that class of improvements pay their part when they buy the land; those who do not want them go to some other place to buy.

THE ONTARIO PLAN.

The Chaffey Brothers matured, after a careful examination of the various colony enterprises of Southern California, the most perfect plan ever adopted by a colony in this State. It was briefly as follows:

First—Distribute the water for irrigating purposes over the whole tract and to each



View of "Old Baldy," covered with snow, as seen from San Antonio Canyon, above Ontario.

farm lot in concrete and iron pipes, requiring some forty miles of piping.

Second—Improve the main thoroughfare so that it will be a thing of beauty and usefulness forever.

Third—Furnish a college for the education of the people of the colony.

This of course involved the outlay of vast sums of money before sales could be made. The reader would naturally enquire,

WHAT HAS BEEN DONE?

TWO HUNDRED AND THIRTY-EIGHT THOUSAND FOUR HUNDRED AND NINETY-NINE 77-100 dollars have been spent by the company up to July, 1884, in preparing Ontario for pleasant and profitable homes. All of which remains at Ontario benefiting those owning or purchasing lands in that place. Of the foregoing amount there has been spent

SEVENTEEN THOUSAND SIX HUNDRED AND SIXTY 18-100 dollars in improving streets, planting trees and grading. The most noticeable is Euclid Avenue. It extends from the depot due north seven miles to the mountains; is 200 feet wide; is graded with a fine, hard double driveway its entire length. A row of young Eucalyptus trees (the giant trees of Australia, the largest in the world are of this kind) many of which are nearly 15 feet high, is set out along the sidewalks of this avenue. In the center of the avenue are two rows of palms extending the entire length. In a very few years this avenue will be the grandest, most beautiful and most romantic avenue in the world.

THIRTY-THREE THOUSAND SEVEN HUNDRED AND FOURTEEN 24-100 dollars have been expended in constructing a tunnel to tap the subterranean flow of the San Antonio Canyon, as a reserve and additional water supply for these lands, and in constructing 6,000 feet of ditch. It is constructed of stone laid in cement and has a capacity of 1,000 inches of water.

For the purpose of using the waters of the San Antonio Canyon

TWENTY-SIX AND ONE-HALF MILES OF CEMENT PIPE have been laid through the lands and avenues for irrigating purposes, costing FORTY-THREE THOUSAND dollars.

TEN THOUSAND FIVE HUNDRED dollars

have been expended in laying THREE AND ONE-HALF MILES of four-inch, lap-weld, screw-joint iron pipe which will stand a pressure of 3,000 lbs per square inch, to supply the town site with water. Several miles of smaller pipe have been laid or are on hand for conducting water into houses, etc.

THIRTY-FIVE HUNDRED dollars have been expended in the construction of the depot and side-tracks. In addition to this the S. P. R. R. Co. have just finished an extensive freight depot and store room.

TWENTY-FIVE HUNDRED dollars have been expended in constructing a dam in the canyon to turn out the surface waters, and in constructing roads.

NINE THOUSAND SIX HUNDRED AND TWENTY-FIVE dollars have been expended in other small improvements and incidental expenses.

ONE HUNDRED THOUSAND dollars worth of lands were donated by the Chaffey Brothers to Trustees for the erection and endowment of the Chaffey College of Agriculture of the University of Southern California. The foundations of the building have been laid. Over 400,000 brick are in the kiln for building with, and the contract is ready to let for the erection of the edifice.

A steam planing mill has been established at Ontario by W. J. Waddingham and is fitted up to do all kinds of work in wood, such as doors, blinds, sash, etc.

The Southern Pacific Railroad has built a large freight warehouse for the accommodation of shippers of freight and has established an agent at Ontario for the sale of tickets.

A large grain warehouse has also been put up by Mr. W. J. Waddingham and the same is now full of wheat and barley raised without irrigation on the mesa lands surrounding Ontario.

Over four miles of telephone line extend over the tract for the convenience of the public.

Water for irrigating is delivered in pipes to the highest corner on each ten-acre lot ready for use.

No other agricultural colony or enterprise in the United States has such a large amount of cement and iron pipe in use for irrigating purposes as Ontario.



THE ONTARIO HOTEL.

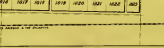
Eighteen Thousand dollars have been expended in the construction and furnishing of this hotel and some adjacent buildings.

This hotel is fitted up in a style to compare with the best hotels in Southern California. The carpets and furniture are of the very best quality and entirely new throughout. The tables are furnished with the best the market affords and it is prepared by most competent and first-class cooks. Tourists and travelers and those who are seeking homes in California will find this a good place to stop as headquarters. Good fishing and hunting in the mountains a few miles distant. J. H. Pawcett is the manager.

We have briefly sketched what has been done at Ontario in the short space of two years, showing its magical growth from a useless stretch of waste land to a garden of beauty. The reader would naturally say: "Well, if the place is as represented it must be that many sales have been made to those who have seen the place. Who and where are they, and what price did they pay for their land?"

We herewith furnish a list of purchasers, with former and present address, so that any one can write to them and ascertain the facts. We invite the reader to communicate with these persons for any further information.

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ONTARIO.

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List of Property Owners at Ontario.

Name of Purchaser.	Residence.	Former Residence.	No. of Acres	Town Lots.	Price.
Alles, F. L.	Ontario	Pontiac, Ill.	20		\$ 4,000
Averill, W. W.	Ontario	Redlands	10		1,500
Auzerais, J. E.	Los Angeles	Los Angeles		1	100
Boggs, W. W.	Los Angeles	Riverside	10		1,500
Boggs, Geo. W.	Los Angeles	Riverside	10		1,500
Boggs, A. W.	Riverside	Riverside	10		1,500
Borthwick, A.	Glasgow, Scotland		10		1,500
Borthwick, J. P.	Ontario	Los Angeles		1	
Burlington, M. C.	Ontario	Burlington, Iowa	20		4,000
Buckley, I. B.	Liberty, N. Y.			9	900
Bodkin, J. J.	Orange		20		3,000
Barlow, Geo.	Belle Plaine, Iowa		10		1,500
Burdette J. W.	Burlington, Iowa		20		3,000
Brown, Rev. D.	Las Vegas, N. M.			2	200
Bradford, Jas.	Ontario		5		1,250
Bradford, M. V.	Ontario			2	200
Bowers, M. V.	Ontario			8	800
Calkins, A. H.	Chicago, Ill.		10		1,500
Calkins, J. S.	Los Angeles		20		3,000
Chaffey, C. F.	Ontario	Riverside	20		4,000
Chaffey, Dr. E.	Ontario	Jamaica	40		8,000
Cavalier, H.	Ontario		10		1,500
Craig, Jas.	Kingston, Canada			1	100
Connelly, Jas.	Ontario	Mississippi		1	100
Dyar, L. S.	Ontario	Klamath, Oregon	32 1/2	1	5,250
Dunlap, J. C.	Ontario	San Bernardino	72 1/2	2	12,325
Davidson, A.	Petaluma		15		3,250
Dwinelle, Prof.	Berkeley		60		
Drew, Edred	Ontario	Exeter, Canada		2	400
English, Mrs.	Santa Barbara	Toronto, Canada	30	2	6,700
Elliot, H.	Ontario	Kingston, Canada		2	200
Ferdinand, P. J.	Los Angeles			2	200
Fleming, Rev. S. J.	Ontario	Boston, Mass.	5		1,250
Gill, N. G.	Ontario		10		1,500
Garcia, J. S.	Ontario	Kiwananda	40		8,000
Green, P. M.	Pasadena			1	100
Gargan, P.	Ontario	Riverside	10	2	1,700
Graves, L. D.	Ontario	New Orleans, La.		3	300
Holmes, N. O.	Ontario	Toronto, Canada	10		1,500
Harris, C. T.	Orange		20		5,000
Hutchins, T.	Ontario		2 1/2		625
Hawes, E. A.	Ontario	Riverside, Me.	10	2	1,600
Holbrook, G. R.	Ontario	Riverside, Cal.	12 1/2		2,125
Holmes, Joseph	Ontario	Loda, Ill.	20		3,000
Holt, L. M.	Riverside		10	2	2,700
Holmes, J. H.	Ontario	Loda, Ill.	20		3,000
Holmes, Thos.	Ontario	Carlin, Nev.	20		4,000
Holdridge, A.	Ontario	Orange		1	100
Harker, W. R.	Anaheim			1	100
Hidden, H.	San Bernardino			3	300
Housekeeper, S. H.	Ontario	Illinois	10		1,500
Heacock, H. B.	San Francisco		12		3,000
Jolliffe, J. H.	Ontario		10		1,500
Jones, D. T.	Ontario	Meade, Mich.		2	200
Klippel, Geo.	Ontario	Buffalo, N. Y.		3	300
Leeke, W. T.	Bly, Oregon		20		4,000
Lefevre, L.	Ontario	France		2	200
Leach, E. E.	Cedar Rapids, Iowa		10		1,500
Mason, R.	Kellogg, Iowa		10		1,500
Melntyre, G. R.	Ontario	San Francisco			
Morgan, H. H.	Red Mound, Wis.		20		3,000
May, W. H.	Ontario	Catlin, Colo.	20		3,000
McCutcheon, R.	Los Angeles			2	200
McMannis, E.	Ontario	Cucamonga		3	300

List of Property Holders at Ontario—Concluded.

Name of Purchaser.	Residence.	Former Residence.	No. of Acres	Town Lots.	Price.
Moore, J. G.	Ontario	De Luz		3	\$ 300
Moores, J. B.	Ontario	Downey		2	200
Madson, A.	San Jose			1	100
Meek, W. T.	Anaheim			1	100
Moore, Dr. H.	Philadelphia, Pa.			2	200
Mansfield, J. L.	Los Angeles			9	900
Nicol, Dan'l	Ontario	Kingston, Canada	10		1,500
Neal, Cath.	Pomona	Riverside		1	100
Nicholson, W. G.	Ontario	Kingston, Canada		2	200
Newman, Jas.	Ontario	Kingston, Canada		2	200
Noland, C. R.	Riverside			2	200
Newmark, H.	Los Angeles			2	200
Olrich, J.	Los Angeles		10		1,500
Oakley, H.	Ontario	London, Canada	9½		1,425
Payne, A. E.	Ontario	N. Clarendon, Pa.	10		2,500
Piddington, A.	Ontario	Toronto, Canada	20		4,000
Rubio, A.	Ontario	Los Angeles	40		8,000
Rice, C. T.	Riverside		10		1,500
Shepherd, B. C.	Brockville, Canada		12½		3,175
Sykes, Dr. C. R.	Chicago, Ill.		20		4,000
Stewart, John	San Francisco			1	100
Sweet, O.	San Jose			6	600
Sherman, C. E.	Caliente		32½		6,125
Stowell, N. W.	Los Angeles		20		4,000
Stein, John	Ontario	Ottawa, Canada	5		750
Stratford, H. C.	Ontario	Oneonta, N. Y.	12½	2	2,350
Strong, S. W.	Ontario	Medicine Lodge, Ks	20		3,000
Shaw, D. A.	Ontario	Los Angeles	40		6,000
Steele, S. W.	Ontario	Cucamonga		1	100
Smith Bros.	Ontario	Anaheim		2	200
Sykes, A. J.	Romeo, Mich.		20		4,000
Turner, A. M.	Riverside			3	300
Tays, J. B.	Ontario	El Paso, Texas	15	11	4,150
Tays, Rev. J. W.	El Paso		40		8,000
Tays, J. A.	Ontario	El Paso, Texas	20		4,000
Taylor, Leon	Ontario	Chino	10		1,500
Walford, A.	Los Angeles	London, England		1	100
Whittaker, J. W.	Ontario	San Francisco	10		1,500
Waddingham, W.	Ontario	Kingston, Canada	20		4,000
Weaver, S. P.	Ontario		10		1,500
Widney, R. M.	Los Angeles		20		5,000
Woodbury & Hatch	Ontario	Los Angeles		1	150
Westwood, J.	Ontario	Boston, Mass.	10		1,500

ONTARIO.

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List of Lots Sold with Estimated Value of Improvements Thereon, by Private Parties, July, 1884.

NAME OF OWNER.		Value of trees, vines, etc.	Buildings and fence- ing.	Value of Buildings.	Total Value of Improve- ments.
J. B. Tays.....	9 town lots.....	\$ 300	House and barn..	\$4,350	\$4,650
W. B. Chaffey.....	2 town lots.....		Barn.....	600	600
J. S. Garcia.....	40 acres.....	1,000	House and barn..	3,500	4,500
M. C. Buflington.....	20 acres.....	1,000	House and barn..	1,500	2,500
F. L. Allos.....	20 acres.....	2,000	House and barn..	1,200	3,200
W. B. Chaffey.....	2½ acres.....	300	House.....	4,000	4,300
J. C. Dunlap.....	30 acres.....	500	House and barn..	400	900
A. Piddington.....	20 acres.....	800	House.....	150	950
J. P. Borthwick.....	1 town lot.....		House.....	500	500
D. T. Jones.....	2 town lots.....		Store.....	1,500	1,500
L. D. Graves.....	3 town lots.....		Store.....	650	650
M. V. Bowers.....	3 town lots.....		Barn.....	600	600
Smith & Moores.....	2 town lots.....		Stable.....	500	500
W. G. Nicholson.....	2 town lots.....		House.....	500	500
J. Connelly.....	1 town lot.....		House.....	200	200
P. Gargan.....	1 town lot.....		House.....	1,000	1,000
E. McManius.....	1 town lot.....		Two stores.....	900	900
J. B. Moores.....	2 town lots.....		House.....	650	650
Geo. McIntyre.....	1 town lot.....		House.....	2,000	2,000
E. McManius.....	2 town lots.....		House.....	150	150
Geo. McIntyre.....	1 town lot.....		House.....	350	350
F. H. Cavalier.....	10 acres.....	500	House.....	350	850
John Stein.....	5 acres.....	300	House.....	150	450
S. H. Housekeeper.....	10 acres.....		House.....	250	250
W. H. May.....	20 acres.....	1,600	House.....	200	1,800
H. Nedeecken.....	100 acres.....	10,000	Two houses.....	1,500	11,500
Joseph Holmes.....	20 acres.....	2,000	House and barn..	2,500	4,500
S. P. Weaver.....	10 acres.....		House.....	200	200
E. E. Leach.....	10 acres.....	1,000	Barn.....	300	1,300
H. Oakley.....	10 acres.....	500	House.....	175	675
G. Holbrook.....	10 acres.....	1,500	House.....	1,000	2,500
I. W. Whittaker.....	10 acres.....	1,000	House.....	400	1,400
S. W. Strong.....	20 acres.....	2,500	House.....	300	2,800
Dr. Chaffey.....	40 acres.....	3,500	House, etc.....	4,750	8,250
M. V. Bradford.....	1 town lot.....		House.....	250	250
Wm. Hall.....	2½ acres.....		House.....	100	100
H. Elliott.....	1 town lot.....		House.....	300	300
E. H. Jolliffe.....	10 acres.....	750	House.....	350	1,100
D. A. Shaw.....	40 acres.....	5,000	House.....	1,000	6,000
R. O. Holmes.....	10 acres.....		House.....	150	150
H. Holmes.....	20 acres.....	1,500	House.....		1,500
G. McIntyre.....	20 acres.....	1,800	Fence.....	60	1,860
J. B. Tays.....	10 acres.....	1,000	House.....		1,000
A. Davidson.....	10 acres.....	1,000	House.....		1,000
J. B. Tays.....	5 acres.....	500	House.....		500
A. Davidson.....	5 acres.....	500	House.....		500
C. R. Sykes.....	20 acres.....	2,000	House.....		2,000
C. Chaffey.....	20 acres.....	1,200	House.....		1,200
J. W. Tays.....	40 acres.....	3,000	Barn.....	200	3,200
A. Rubio.....	20 acres.....	1,500	House.....		1,500
J. Westwood.....	10 acres.....	700	House.....	100	800
R. Mason.....	10 acres.....		Barn.....	200	200
I. B. Buckley.....	9 town lots.....	200	House.....		200
C. H. Dwinelle.....	60 acres.....	3,000	Fencing, etc.....	1,000	4,000
A. W. Boggs.....	10 acres.....	1,500	House.....		1,500
W. W. Boggs.....	10 acres.....	1,500	House.....		1,500
G. W. Boggs.....	10 acres.....	1,500	House.....		1,500
Ontario Land Co.....	2½ acres.....	500	Hotel.....	10,000	10,500
Ontario Land Co.....	10 acres.....	500	Boarding house..	1,500	2,000
Ontario Land Co.....	1 town lot.....	150	Office.....	1,900	2,050
Dan Nicol.....	10 acres.....	1,000	House.....	600	1,600

**List of Lots Sold with Estimated Value of Improvements Thereon,
by Private Parties, July, 1894---Continued.**

NAME OF OWNER.		Value of trees, vines, etc.	Buildings and fence- ing.	Value of Buildings.	Total Value of Improve- ments.
J. A. Tays.....	20 acres.....	\$2,000	House.....	\$ 500	\$2,500
A. Holdridge.....	1 town lot.....	50	House.....	350	400
L. S. Dyar.....	20 acres.....	2,300	House.....	350	2,650
L. S. Dyar.....	2½ acres.....	200	.....	.....	200
Thos. Holmes.....	20 acres.....	2,000	Fencing.....	120	2,120
W. W. Averill.....	10 acres.....	1,000	Barn, etc.....	400	1,400
P. Gargan.....	10 acres.....	800	Fence.....	60	860
L. Taylor.....	10 acres.....	1,000	Fence.....	60	1,060
W. Waddingham.....	20 acres.....	1,050	.....	.....	1,050
W. B. Chaffey.....	20 acres.....	2,000	.....	.....	2,000
E. Hawes.....	10 acres.....	500	.....	.....	500
W. Neal.....	1 town lot.....	.....	House.....	300	300
H. C. Stratford.....	10 acres.....	1,000	House, etc.....	1,200	2,200
J. H. Fawcett.....	20 acres.....	2,000	Fence.....	120	2,120
L. M. Holl.....	10 acres.....	900	.....	.....	900
T. Hutchins.....	2½ acres.....	600	.....	.....	600
N. G. Gill.....	10 acres.....	900	House.....	300	1,200
W. T. Leeke.....	20 acres.....	1,500	.....	.....	1,500
H. H. Morgan.....	20 acres.....	1,000	Fence.....	120	1,120
N. W. Stowell.....	20 acres.....	.....	House.....	500	500
S. W. Steele.....	1 town lot.....	.....	Shop.....	150	150
A. Borthwick.....	10 acres.....	1,000	.....	.....	1,000
G. Olrich.....	10 acres.....	.....	House.....	250	250
S. J. Fleming.....	2½ acres.....	300	.....	.....	300
J. G. Moore.....	1 town lot.....	.....	Barn.....	150	150
J. J. Bodkin.....	20 acres.....	100	.....	.....	100
B. C. Shepherd.....	2½ acres.....	300	House.....	2,000	2,300
W. J. Waddingham.....	1 town lot.....	.....	Shop.....	175	175
L. M. Holt.....	2 town lots.....	.....	House.....	1,050	1,050
Ontario Nursery.....	40 acres.....	10,000	.....	.....	10,000

Total value of trees, vines, etc., \$83,200; total value of buildings, \$63,140; total value of improvements, \$156,340.

Ontario Nursery.

Forty thousand seedling peach trees for budding.

Twenty thousand seedling pear trees for grafting.

Fifteen thousand seedling apple trees for grafting.

Sixteen thousand apple grafts.

One thousand cherry grafts.

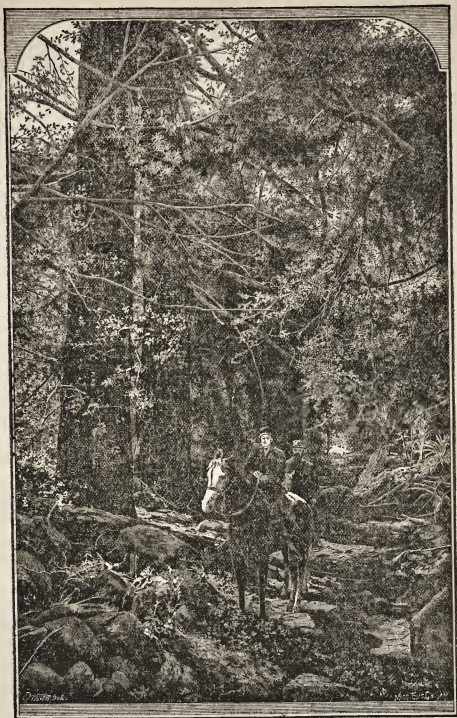
One thousand pepper trees.

One thousand ornamental trees.
One thousand two hundred fruit trees in orchard.
Sixteen thousand grape cuttings in vineyard.

W. B. CHAFFEY, Esq., *Dear Sir:*—All the above nursery trees were planted last spring, and they have all made a good growth, much better than I expected.

Yours truly,

Ontario, Aug. 1, 1894. D. A. SHAW.



Fine Forests of San Antonio Canyon, above Ontario.

The Price of Land at Ontario.

Are not the prices too high? Cannot equally good lands be bought for less money?

Yes, equally good lands can be bought in Africa, or South America, or Mexico for less money; and there are remote, isolated places in California where land can be bought for less money.

But in the two cases what do you buy? At Ontario the land without the water and the other public benefits is worth only \$75 to \$100 per acre; but in buying, the purchaser's land is enhanced in value by the \$28,400 spent by the company in public improvements, in which every purchaser is a joint beneficiary as much as if he held an absolute title to his part.

Land in New York City is worth thousands of dollars per foot. Why? Because of the surrounding circumstances of commerce, business, society and civilization. Aside from such circumstances, land in New York City is worth but a few dollars per acre.

The same rules apply at Ontario. The value of property is fixed and made by the combination of circumstances which nature and money have produced—productive, exhaustless soil, abundance of water, irrigating dams, ditches, tunnels, pipes, avenues, hotels, railroads, colleges, health, civilization, good society, live, energetic, wealthy settlers—all combine to make the land reasonable at its present prices.

If a person wants this combination around his home and family he must expect to pay for it in some form. Here it already exists, and is paid for by the owners of the land, and is added to the ordinary price of land—each purchaser paying his proportion.

If a person wishes land without these circumstances of health, civilization and education he can get it in other portions of the world; but let him remember that when he has so purchased the cheap lands it will cost him vast sums to add to it these things which alone elevate and build up the human race into higher culture, enjoyment and civilization. Lands at any price without these aids are far dearer

than Ontario lands are at their present prices, with the auxiliaries existing.

Men of good business judgment and foresight see these facts and unhesitatingly purchase here for their homes. We venture the statement that in the State of California there is not a collection of men who will average in wealth, business ability, judgment and foresight as high as the purchasers of land at Ontario.

A person lacking in these qualities never purchases in Ontario. He is the only one who, after seeing, says lands are too high.

Our men of best ability classify Ontario lands as reasonable in price and destined to advance in rapid strides to \$1000 per acre.

\$16,000 an Acre.

J. A. Carit, of San Bernardino, Cal., a native of France, but for several years a resident of Central America, and more lately of this county, mentions the fact that vineyard property near Bordeaux, France, has sold recently at as high a figure as \$16,000 per acre, and that the vines only bear about 2½ pounds each of grapes. Where is the price of land going to yet in this country?—*Press and Horticulturist*.

Ontario Prices.

In answer to a number of inquiries for our opinion of the prices of Ontario land, we answer:

The prices asked for lands may seem a little high, but when everything is taken into consideration, with a guarantee of every promise made being fulfilled to the letter, we consider the lands very reasonable.—*Rural Californian*, 1882.

Since the above was printed the promises have been carried out, as hereinbefore shown.

Is One Inch of Water to Ten Acres Enough?

Pasadena uses about one inch to 20 acres; Riverside, one inch to 6 acres; Pomona, one inch to 10 acres; Los Angeles city, about one inch to 10 acres; Long Beach, one inch to 15 acres; Ontario, one inch to 10 acres.

One inch of water is worth \$1000 to \$1500. In time it will be worth double that.

ONTARIO WATER RIGHTS.

Water Contract Between the Chaffey Brothers and San Antonio Water Company.

The following contract is the basis of the water rights of settlers in the Ontario tract:

Agreement made and entered into this 23d day of November, A. D. 1882, between Geo. Chaffey, Jr., and William B. Chaffey, parties of the first part, and the San Antonio Water Company, a corporation organized under the laws of the State of California, party of the second part, witnesseth: That, whereas, the parties of the first part are the owners in certain water, water rights, water privileges and appurtenances, flowing from the Cucamonga mountains, in San Bernardino county, California, in and through the San Antonio canyon and creek to the extent of one-half of all the water in the same, and party of the second part is desirous of obtaining title to the same;

Now, therefore, in consideration of the covenants and agreements hereinafter mentioned, and of one dollar in hand paid each to the other by the parties hereto, the receipt of which is hereby acknowledged, the said parties mutually covenant and agree as follows, to-wit:

First. The parties of the first part will, at their own cost and expense, construct a reservoir on the northern part of the colony of Ontario, in said county, upon a site which shall be mutually agreed upon, and which reservoir shall be substantially constructed, and of a capacity to hold a sufficient supply for distribution over the lands sold and to be sold in said colony by parties of the first part, and will flume, pipe or by other means convey the one-half of the water from said canyon or creek, and of the waters to be developed therein into said reservoir as rapidly as the land sold by parties of the first part shall be ready for irrigation to the highest corner on each ten-acre lot owned by the stockholders of the party of the second part, placing on each line of pipes turn-outs so constructed as to measure accurately the water to be delivered to each tract, and also to and over the town tract of Ontario, as located by said parties of

the first part, in said colony, containing one hundred and sixty acres of land. The pipes to supply said town with water shall be laid on all streets running north and south from a point which will give sufficient pressure for a twenty-foot head at the north line of said town, and said parties of the first part will, on the 15th day of July, 1883, convey by deed of grant to said parties of the second part all the waters to the extent of one-half thereof, and all of the waters to be developed flowing in and through said San Antonio canyon and creek, and the rights and privileges appurtenant thereto, and also the reservoir heretofore mentioned, and the flumes, pipes, or other modes of conveyance built for conducting the said water to the reservoir, and the right of way therefor, and also the right to take and use all necessary materials from the adjoining lands to repair or reconstruct said reservoir. It being understood that parties of the first part may use the water at any point or points above the reservoirs for milling or mechanical purposes, or any purpose requiring power; provided that the same shall be returned into the reservoir without waste of the original supply.

Second. That said party of the second part will, on or before the 15th day of July, 1883, on demand issue to the said parties of the first part shares of stock of the San Antonio Water Company, to be estimated as follows, to-wit:

All water flowing from said San Antonio canyon or creek shall, on the 15th day of July, 1883, be measured at the place of discharge into the said reservoir. An inch of water for all purposes mentioned herein is defined to be a stream which will flow through an aperture one inch square in a one-inch plank under a four-inch pressure from the center of such aperture. One share of stock shall be issued for each one-tenth of an inch of water so measured. The stock subscribed by the corporators of party of the second part shall be included in and be a part of the said issue, and shall be delivered previous to said 15th day of July, 1883, either to said subscribers or to the parties of the first part on demand to the extent of two thousand shares.



San Antonio Canyon, Six Miles from Mouth. The Source of Water Supply for Ontario.

There shall be issued to R. M. Widney, of Los Angeles, one hundred and sixty shares of the stock of said corporation, to be held by him in trust for the town of Ontario aforesaid; and the inhabitants of said town shall be entitled to the use of sixteen inches of water for the purposes set forth in the certificate of incorporation of said San Antonio Water Company, and subject to all rules, regulations and charges of said corporation; provided that should it be found a less number of inches of water will supply said purposes, then said shares shall be reduced so as to represent the number of inches actually required, and the overplus, if any, shall be issued for the benefit of and to the parties of the first part in accordance with the terms of this agreement.

Third, From and after July 15th, 1883, the parties of the first part may improve or further develop water in said canyon or any other canyon in the vicinity or at any other land owned by them, or obtain water, by purchase or otherwise, from any party, provided that the water so developed, purchased, or owned can be put in the said reservoir by pipes or flumes as hereinbefore described; and at the end of each year for fifteen years, on each succeeding 15th day of July, the additional water so delivered in the said reservoir over and above that measured in the preceding year, shall be measured in the same manner as set forth in article second herein, and additional shares of stock shall be issued therefor upon the same basis as above set forth, provided that the said parties of the first part shall at the same time convey by deed of grant to party of the second part all land and water so developed, purchased or owned, and the pipes or flumes appurtenant thereto, and the right of way therefor. It being understood that further development can be continued on the same land or on that purchased or owned in each year for fifteen years from the 15th day of July, 1883, by said parties of the first part, and additional shares of stock issued to them for the same, upon the same basis and subject to the same conditions and provisions as hereinbefore set forth. It being further understood that said party of the second part have possession of and

full control over all distributing pipes from the reservoir as soon as the same shall be constructed and laid.

Fourth, During the aforesaid term of fifteen years from the 15th day of July, 1883, the said party of the second part hereby binds itself not to issue or dispose of any stock in its company to any other person or persons than those hereinabove mentioned. It being understood that on the 15th of July, 1897, the parties of the second part shall be in the full possession by deed of grant, from the parties of the first part of all sources of water supply, all water and water rights, reservoirs, flumes, and pipes of supply and distribution, and all rights of way therefor, herein mentioned, and after said 15th of July, 1897, the said party of the second part shall have the exclusive right to develop water on the tracts of land hereinbefore described, and may purchase any water or water rights after said last date, from any person or persons and develop the same paying therefor in stock or otherwise. If in stock, then at not less than upon the same basis as hereinbefore set forth, and no stock shall be sold or disposed of to any person except upon the basis of one share for each one-tenth of an inch of water so purchased or for any other consideration than for further water supply; and parties of the first part agree that right of way over and through any land owned by said parties of the first part shall be granted free of cost for all water so developed or purchased. This agreement shall bind the heirs, executors, administrators, successors and assigns of the respective parties hereto.

In witness whereof the parties of the first part have hereunto signed their names.

[Signed]

GEO. CHAFFEY, JR.

W. B. CHAFFEY.

And the party of the second part has signed its name and affixed its corporate seal, being first duly authorized by a resolution of its Board of Directors.

SAN ANTONIO WATER COMPANY.

[SEAL.] R. M. WIDNEY, Pres't.

Attest: L. M. HOLT, Sec'y.

Extract from minutes of meeting of Board of Directors, San Antonio Water Company.

DIRECTORS' MEETING.

ONTARIO, NOV. 23, 1882.

Resolved, That the agreement to be entered into on the 23d day of November, 1882, between George Chaffey, Jr., and W. B. Chaffey, of the one part, and the San Antonio Water Company on the other part be, and the same is hereby ratified in all its parts, and the President and Secretary of the corporation are hereby authorized to sign, acknowledge and affix the corporate seal of this corporation to said agreement.

I certify the above to be a true, full and correct copy of a resolution as recorded in the minutes of the record book of a meeting of Directors of this corporation.

L. M. HOLT, Sec'y.

What an Inch of Water Will Do.

People generally, and Eastern people in particular, have a very vague idea regarding an inch of water. For the benefit of such we present a few facts relative thereto.

In discussing water rights in Southern California it has become customary and convenient to speak of an inch of water to a certain number of acres of land. For instance, Riverside has been using one inch of water to six acres of land, and wasting as much more through its wasteful systems of open ditches. Redlands and Etiwanda are using one inch to eight acres; Ontario and Pomona, one inch to ten acres, while Pasadena last season had one inch to 160 acres, but now they have put up a pump at a cost of \$12,000 and are furnishing the settlement with more water, but have also spread their supply over more land. Los Angeles has had one inch to from seven to ten acres.

An inch of water is the quantity which flows through an aperture one inch square in a one-inch plank, under a four-inch pressure, measuring from the center of the aperture.

Fifty inches of water will furnish a cubic foot of water per second.

A stream of water is said to contain a certain number of inches of water for irrigating purposes, based upon a measurement in midsummer, say the 15th of July or the 1st of August. The stream will be much larger during April, May and June, and the stream will commence to increase in volume again by the 1st or

15th of September, although no rains may fall for several months after those dates.

An inch of water flowing twenty-four hours will fill a cubical cistern 10 feet square and 17 1/4 feet deep.

On a basis of one inch of water to eight acres of land each eight-acre lot would receive 390,000 gallons of water each month. The average number of trees to eight acres is 576; therefore the ground surrounding each tree would receive 677 gallons per month or about twenty-two barrels of water in thirty days.

This basis of one inch of water to eight acres of land is equal to a rainfall of one and three-fourth inches during the driest month, and from two to three inches per month during April, May and June; also during October and November. — *Press and Horticulturist*.

How to Estimate the Real Value of Land.

The intrinsic or real value of land is determined by comparing its net income with the rate of interest at that place. If after deducting all expenses land gives a net yield of \$6 per acre, and the current rate of net interest is 6 per cent., then the land is worth \$100 per acre.

If the rate of interest goes down to 3 per cent., then the same land is worth \$200 per acre.

If the rate of interest remains at 6 per cent., and the net income from the land runs up to \$30 per acre, then the value of the land is \$500 per acre.

Land in orange trees frequently gives \$800 net profit per acre, which would give as the value of the land \$10,000 per acre. There are orange groves in Southern California that the owners would not take \$10,000 per acre for.

Vineyards for raisins or wine will give a net profit of as high as \$300 per acre, which would put the value at \$5000 per acre. Lands in Ontario and in many places in Southern California will in fruits yield a net profit of from \$60 per acre up to \$600, and are intrinsically worth from \$1000 upwards.

Home seekers are beginning to come in already and a large emigration may be looked for this winter.

EDUCATIONAL.

Interesting History — Early Days at Ontario — Laying the Corner Stone of the Chaffey College of Agriculture

When this occurred Ontario had just been started. Not a settler upon it, and not an acre of land cultivated. The following is from the Los Angeles *Daily Herald* of March 18, 1883:

The programme for Saturday, March 17th, 1883, made Ontario, the new fruit colony, the objective point. At 8:30 the Press Excursion and others embarked by rail at the Riverside depot and proceeded to Colton. At 9 o'clock a special train, chartered by Chaffey Brothers, took the people and started for Ontario where the train side tracked for the day. At this point scores of people had assembled to take the people to the mesa at the foot of the mountains, some seven miles distant. A portion of the conveyances were loaded up at once and started up Euclid Avenue, which has been graded for a distance of six and a half miles. The excursion had but just got away from the station when another train arrived from Los Angeles, bringing another large crowd of people, but there were teams enough for all.

By 11:30 o'clock all had arrived on the picnic grounds, which consisted of a tableland at the foot of the mountains at the head of the Ontario tract. There are in this elevated plateau some 80 acres of the finest land to be found in the State, and it is here that it is proposed at no very distant day to erect a fine hotel after the style of Sierra Madre Villa in Los Angeles county. The location is about 800 feet above the town of Ontario, on the railroad, and about 1800 feet above the sea level, and the view from this point is one of the finest to be found in Southern California. Had this mesa been laid off into five-acre tracts the whole could have been sold at high figures on short notice to those present.

There had been prepared here a fine lunch, which was spread on a long table, and at a signal from William H. Barnes, Manager of the Press Excursion, who took his place at the head of the table, the

company soon fell into line and all helped themselves until five hundred appetites, sharpened by the pure mountain air, were entirely satisfied.

After lunch Mr. Barnes mounted a box, blew his whistle, and in a few minutes had the Press Association around him, together with a large and attentive audience of other people. He addressed them briefly, referring to the enterprise and hospitality of the Chaffey Brothers—a firm that advertised more liberally than any other on the coast.

Mr. L. P. McCarthy, of the San Francisco *Statistician*, Secretary of the Pacific Coast Press Association, then introduced the following resolutions:

WHEREAS, The spirit of enterprise and energy should ever be recognized by "press" and "people," therefore, be it

Resolved, That the ideas to be illustrated in the proposed Colony of Ontario and the intended settlement of said tract by an intelligent and thrifty people merits and is entitled to the cordial approbation of every reflecting mind.

Resolved, That the Chaffey Brothers, in this enterprise, have the sincere wishes of all here present for their entire success in each and every particular.

Resolved, That for the generous and liberal hospitality this day extended, we hereby evidence our hearty appreciation and close with the sentiment "that we may be spared to return to this spot five years from this date and find instead of an uninhabited plain, a happy colony of handsome women and gallant men living in comfortable homes beneath their own vine and fig tree, basking in the sunshine of a golden prosperity."

Resolved, That a copy of these resolutions be presented to the Chaffey Brothers and that the same be inscribed upon the pages of the record book of the Pacific Coast Press Association.

President Barnes invited all to vote upon the resolutions, when they were adopted with a shout that fairly made the mountain canyons ring back their echoes.

The multitude then took to the wagons, and soon a procession several miles long was returning down the avenue, headed for the college campus on the west side of the avenue, one mile from the railroad track. Here they found the foundation walls of the college building already laid and the corner-stone in readiness for the final ceremonies.

Rev. A. M. Hough called the meeting to order, after which the grand anthem,

"O! Thou Whose Power,"

was finely rendered by Mr. J. H. Book, Mrs. Louise I. Beeson and Mrs. A. E. Pomeroy. Prayer was then offered by Rev. M. F. Colburn, of Riverside.

Mr. E. J. Wickson, of the *Pacific Rural Press*, delivered a carefully prepared address, of which the following is the prologue—the address we omit for want of space:

homes, an institution the aim of which shall be to bring to the inmates of these homes the improving influences of mental and moral culture, and at the same time disseminate among them a better understanding of methods and means which may advance their material prosperity. Thus, while they are establishing homes, you establish in the midst of them an influence toward home improvement; while they are confidently making investment and putting forth effort to secure for themselves and their children the blessings and



Chaffey College of Agriculture.

Mr. President, Gentlemen of the Board of Trustees of the Chaffey College of Agriculture:

We are assembled to-day to mark by appropriate ceremonies the inception of an undertaking which we trust will result in an important contribution to the educational and industrial advancement of the State. You plant in a fruitful region, which we expect will be filled with happy

benefits of industrial success, you have undertaken to build up an agency which shall help to make the attainment of that success more sure. The effort is one eminently fit to be made, and it reflects credit upon you as devoted friends of intellectual and industrial advancement, and upon those by whose generous enterprise you are furnished with materials for the work you have undertaken. May your effort

be crowned with the fullest success. May it be yours to remember with pride when this grand district of our State shall be fully clothed with the green and gold of growth and fruitage, that you stood here when the fields were bare and pledged yourselves to the upholding of an institution which proved itself an important factor in the development which your eyes shall see.

Judge R. M. Widney, Chairman of the Board of Directors of the University, then delivered the following address:

[When this address was delivered Ontario was an unbroken waste; not a settler on it, not an acre cultivated.]

ADDRESS OF JUDGE WIDNEY.

Ladies and Gentlemen: Many centuries ago a Syrian king by night surrounded a city in which was one of the Prophets of Israel whom he wished to kill. When the morning dawned, a young man who was with the prophet, seeing the Syrian army, cried out in despair, "Alas, my master, what shall we do?" Elsha prayed that the Lord would open the eyes of the young man that he might see, and his eyes were opened; "and he saw; and behold, the mountain was full of horses and chariots of fire around and about Elsha." With the natural eye you look upon these surrounding uncultivated and unsettled plains, and you say, "Why lay the foundation stone and build a college here and now? It is premature and must fail." But let us draw aside the veil and behold the unseen future. I pray that your eyes may be opened and that you may see the things "that must shortly be."

The United States is rapidly populating in every part. By immigration and birth the country will be as densely populated as the countries of Europe.

The desirable places where climate, scenery, soil, water, commerce and education combine, will settle up most quickly. These circumstances combined ere long will populate Ontario with homes and a teeming population. Not only Ontario, but all these extended plains stretched out before you will be densely populated in the years to come. Water will be stored in these mountain canyons, or drawn from deep wells, or brought in

pipes from distant mountain streams and rivers, and cause these valleys to blossom as the Garden of the Lord. Not only is it true of this place, but of all Southern California. A heavy population will yet tread this sunny southern land.

About half a century ago one of the strong minds of Europe wrote a little book called the "Vestiges of Creation," treating of the growth and development of the human race. He prophesied, his eyes were opened and he saw into the future. Of the United States he said: "The United States might be expected to make no great way in civilization till they be fully peopled to the Pacific, and it might not be unreasonable to expect that when that event has occurred, the greatest civilization of that territory will be found in the peninsula of California and the narrow strip of country beyond the Rocky Mountains." This day, with your natural eyes, you behold that prophecy being fulfilled.

We build these foundations and lay in place this corner-stone, not for the present alone, but looking down the flowing tide of years we see the coming millions and we build for them as well. The demand of our own day and society must be met. Those who settle here want the best educational facilities for their children, at their own door.

The earth will be the home of our descendants for thousands of years after we have passed away. We should do all we can to make the earth most beneficial to them. The literature, enlightenment and comforts that we enjoy are the results of the educational work of our ancestors. They erected colleges and universities in the past centuries, and from them came the educated and trained minds, which by scientific investigation and invention have produced the astounding works and civilization of this nineteenth century. We owe it to posterity to do for them as has been done for us.

It becomes necessary then to educate men in agriculture, so that they may know how to increase the productive character of the earth and thus provide for the support of the dense population that is to be.

In the Garden of Eden the command was given to man "to subdue the earth."

life can not with his puny physical strength subdue the earth. It can only be done by his intellect. By it he has been subduing the forces of the air, earth and water. And now we look upon powers and forces and velocities as our obedient servants.

The establishment of this Agricultural College will give to those who shall tread its halls in pursuit of knowledge that power which is specially necessary to solve the agricultural questions that shall be presented when the coming civilization shall be here in its glory.

Those of us who labor and have labored to establish the University of Southern California have looked into the future and seen and believed the coming future destiny of man in this garden spot of earth.

This Chattey College of Agriculture is one of its branches destined to accomplish its great mission for the race. In their liberality they have done that which will hand their names down in most grateful remembrance to the latest family of man. If they accomplish no more than this, they will have done a work that is an honor to a life time.

Though the tide of prosperity may ebb and flow in Southern California, and though in dark times some may say as did the young man with Elisha, "Alas, what shall we do," yet the friends of this great work, looking into the faces of the pleading ones of the future, will stand by this work until success crowns its efforts.

Many of you present wield that mightier power than the sword, the pen. This power came to you through the colleges and universities of the land. You can aid in this work and repay to some extent the benefits you have received. You speak to the millions and the millionaires. Forever wield your pens actively and energetically to build up all institutions of learning, that their benefits may flow down the tide of time. Wealth and laurels left to children too soon disappear and poverty is upon them. Leave them these educational facilities and their children, though poor, may come within these halls of learning and go forth the peer of any man in intellectual strength and power. To aid in accomplishing this great work, we this day lay this corner stone.

At the conclusion of the address of Judge Widney, Hon. E. F. Spence, Chairman of the Board of Directors of the University of Southern California, was called on for a speech and spoke as follows:

ADDRESS OF MR. SPENCE.

Tradition informs us that it was resolved in the councils of the Most High that a house should be built. From the sacred writings we learn that the desire permeated the great, the good, the far-seeing and progressive mind that a house should be built. Nations, peoples, states, communities are actuated by the same impulse. The enquiring mind asks why and wherefore such desire. The reply comes responsive from the olden time and finds a lodgment in the human breast that the loftiest aspiration of man is to worship God. Still the unsatisfied enquirer asks, why and wherefore? And still again comes the reply that it is in accord with our higher nature that God should be worshipped according to the light shed upon us by His books. The doubting yet enger mind still persists and asks, what are his books? We reply that a part of his books are always with us. We see them in the sunshine and in the storm, the ceaseless surges of our Pacific, the quiet murmur of the smallest rivulet that gushes forth from the mountain brow, the life and health-giving breezes that sweep over our southern plains, the soil upon which we stand, the sturdiest tree that graces the Sierra's side, the tiniest floweret that blushes upon earth's carpet, are all leaves in the book of God. To-day we lay the corner-stone of a house dedicated to the reading and understanding of this book. Our sincerest desire is that the students who shall in the coming years occupy it may so usefully employ their time that the influences of the knowledge received of the earth upon which we live, its capabilities and possibilities, may be felt for good for coming generations.

Rev. M. M. Bovard, President of the University of Southern California, then in a few well chosen remarks,

Laid the Corner-Stone.

The audience then joined in singing "America," after which the benediction

was pronounced by Rev. Mr. Farnsworth, of Pasadena.

Following is a list of articles deposited in the corner-stone:

A copy of the *PRESS AND HORTICULTURIST* of March 10, 1883, the first edition printed on the new steam power press after the fire.

A copy of the resolutions adopted by the Press Association and others at the picnic regarding Ontario the firm of Chaffey Brothers. See resolutions above.

Los Angeles Daily Times, Los Angeles Daily Herald, Los Angeles Daily Express, Los Angeles Daily Commercial.

San Francisco Chronicle, San Francisco Call and Post.

Record book with names of those present.

Files of Ontario Fruit Grower to date.

Christian Advocate, San Francisco.

Pacific Rural Press, San Francisco.

Postal Index, San Francisco.

Illustrated Herald, 1882.

Ontario Pamphlet.

Downey Signal.

Names of singers—Mrs. Louise I. Bee-

son, Mrs. A. E. Pomeroy, J. H. Book.

Files of University paper.

Copies of blank deeds, contracts, checks and warrants used by the Trustees in transacting business of the University.

Invitations to the laying of the corner stone of the University building and also for this occasion.

Postal card.

Programme of Editorial Press excursion.

Ticket to Southern California Citrus Fair at Riverside, 1883.

Ten-cent piece, 1875, by H. W. Buck, Mt. Ayr, Iowa.

Three-cent stamped envelope.

Five-cent piece, L. P. McCarty.

Copper cent, A. T. Hatch, Susan.

Badge of Pacific Coast Press Association.

Half-dollar, found in Virginia City International Hotel after the late fire, by W. H. H. Scott.

Smooth half-dollar, F. E. Little.

Mule shoe, D. Nealon, Cucamonga.

Catalogues of Southern California University entertainments up to present time.

Brief of Laura de Force Gordon on the subject of allowing women to vote at school elections.

Stanza by Madge Morris.

Map of Ontario.

Copies of the deed and contract between Chaffey Brothers and the Trustees of the College.

Minutes of the M. E. Church Conference.

Photograph of the Chaffey Brothers.

A book containing the autographs of about two hundred of the persons present.

CARDS.

Daily and Weekly Tidings, Grass Valley; W. E. Beeson, Grangers' Business Association, San Francisco, by A. T. Hatch; Rural Californian, Geo. Rice, edi-

tor; Geo. E. Jones, Iowa; California Patrons, San Francisco; San Jose Pioneers, Hixson, Just & Co., Horton House, San Diego; Alfred J. Howe, Sentinel, Santa Cruz; W. J. Cook, "Normal Worker," Vacaville, Cal.; A. R. Martin, Riverside, and Canadian 5-cent piece; Bartling & Kimball, San Francisco; W. H. Barnes, San Francisco Call; W. G. Phelps, Stockton; Joseph Winterburn, San Francisco; J. R. Brooks, Denver, and silver dollar, 1881; badge of Santa Clara Pioneers, A. P. Murgotten; Joseph Dorrey, Prang's Agent, San Francisco; W. H. Jessup, Haywards; A. F. Hatch, "Fruit Grower;" Santa Cruz Lodge, F. & A. M., by T. S. Schwartz; Duncan McPherson, Santa Cruz; Los Angeles Business College, C. W. LaFetra; N. W. Stowell, contractor for pipe in Ontario; A. Powell, Vallejo, Cal.; H. S. Spaulding.

As the box was being placed in the stone, Miss Madge Morris, the brilliant correspondent of the San Jose Mercury, composed and threw into the stone the following verse:

What is thy destiny, O corner stone,

That we have gathered here to see laid down?

Will it be lost in disappointment's mean?

Or heralded in glory's glittering crown?

A thousand eyes await thy fate to see.

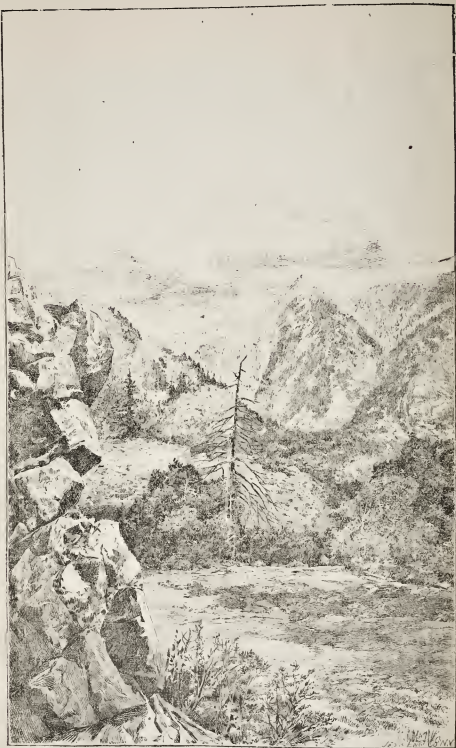
Which shall it be?

The Chaffey College of Agriculture has been endowed by the Chaffey Brothers with 320 acres of land in the Ontario Colony, located on each side of Euclid avenue, to be sold for the benefit of the College. They also give twenty acres of land for the College and campus. The building will cost \$20,000.

The edifice will be brick, with concrete foundation, and two and a half stories high, with a central tower and dormer windows. It will be a very fine looking building, and a good advertisement of the settlement. A fine wood cut of the building is published herewith.

S. P. R. R. Depot.

The railroad company has recently completed for freight purposes at Ontario a platform 38x150 feet, on which is erected a storehouse 38x90 feet. As the S. P. R. R. Co. never make useless expenditures or build in advance of business, the reader here has the practical business judgment of the ablest and most careful business men on the coast as to the future of Ontario.



San Antonio Canyon. Seven Miles from Mouth.

Chaffey College of Agriculture---Deed of Trust.

We herewith reprint the deed of trust for the Chaffey College of Agriculture as it was finally accepted by all the parties in interest, some changes having been made in it since printed in a former number. This deed, and its acceptance by the Trustees and Directors, completes the legal transaction. Under the articles of incorporation the Directors of the University are vested with final and absolute power to receive and establish colleges as parts of the University. There is no supervising or appellate power on the subject. The deed is as follows:

DEED OF TRUST.

This indenture made this 8th day of December, 1882, between George Chaffey, Jr., and W. B. Chaffey, parties of the first part, and A. M. Hough, J. P. Widney, E. F. Spence, G. D. Compton, C. E. White and R. M. Widney, parties of the second part, as trustees of the express trust hereinafter set out, and the "Chaffey College of Agriculture of the University of Southern California," at West Los Angeles, California, which College of Agriculture said second parties agree to cause to be established and put in operation as hereinafter more fully provided, beneficiary herein, party of the third part, witnesseth:

That whereas said second parties are desirous of providing and establishing said College of Agriculture and an Endowment Fund for the support and maintenance thereof, the third party herein, the yearly income from which Endowment Fund alone is to be used for such support and maintenance, and is to be paid to the Regents of said college by said second parties as hereinafter set out. Now, therefore, said first parties hereby grant to said second parties in trust, all of the following described lots, pieces and parcels of land in San Bernardino county, State of California, and being that portion of the town and villa site called "Ontario," being in sections 19, 20, 29 and 30, township one south, range seven west, San Bernardino Meridian, described as follows, to-wit:

All the odd-numbered lots in the busi-

ness and residence blocks numbered from block 1 to block 59 both inclusive, excluding block 53—in all 384 lots. Also the ten-acre lots, so called, or villa lots numbered 821, 823, 825, 827, 845, 847, 849, 851, 879, 881, 883, 885, 903, 905, 907, 909, 937, 939, 957, 959, 987, 989, 1007, 1037, and 1039—in all twenty-five lots containing about 250 acres of land. Also farm lots numbers 797 and 798, containing twenty acres of land, together with the water right for the said twenty acres, as shown by the maps and surveys of said premises; together with similar water rights and water stock that may now be, or may be hereafter, given to any similar lots or lands in Ontario, as shown by the contract with the San Antonio Water Company, which agreement is hereby made a part hereof, to which reference is hereby made, recorded in Book—, p.—, of San Bernardino County Records, to have and to hold in trust for the following uses and purposes, to-wit:

First, Said second parties shall proceed to sell and convey any and all of said lots or parcels of land at such times and for such price and on such terms of payment as said second parties may deem best, save and except Lots 797 and 798, containing twenty acres of land, which is and shall be reserved as the college site or campus for said college, on which shall be located and maintained the main college buildings of said College of Agriculture, unless it become expedient to erect said buildings on some adjacent suitable property. The said site or campus may be conveyed to the said Regents to hold in trust for such site or campus.

Second, The funds received from the sales of said lots or lands, less costs of sales and expenses and improvements, not to exceed fifteen per cent. of the price received, shall be and forever remain an Endowment Fund, the net income from which shall be for the use and support of said Chaffey College of Agriculture, provided that from the sales of said property a sum not to exceed \$500 may be used for expenses of properly placing the property on the market, and from the net money received \$12,000, a little more or less, shall be used for the purpose of erecting a suitable college building on said campus,

and in furnishing the same. Said building shall be of brick, and commenced and completed as soon as sufficient funds are on hand to pay for the same.

Third, Said second parties and their successors shall invest said Endowment Fund in State, county, city or national interest-bearing bonds or securities, such as may be safe, or said fund may in whole or in part be loaned on first security on real estate with good title, but such loans shall not exceed forty per cent. of the actual cash value of the property on which the loan is made. No loan shall be made on any property of the beneficiary herein. No part of said property herein conveyed shall be mortgaged or encumbered while belonging to or held by said second parties. No mechanics' lien shall be valid or binding against the title or interest of said second parties in said land, or the interest of said third party therein.

Fourth—The annual net income from said Endowment Fund shall be subject to the payment of warrants, in their order, drawn thereon by authority of the Regents of said college, said income to be used in establishing and supporting said college. The outstanding warrants shall not be in excess of the income for the year in which they are drawn; all others shall be void.

Fifth, Said Trustees, second parties herein, shall have the power to elect or appoint their successors, and to fill any and all vacancies occurring in their number. A written appointment, signed by a majority of the Trustees holding office at the date of signing shall constitute a valid appointment herein as Trustees. In case of entire vacancy in said trusteeship, the Southern California Conference of the M. E. Church, if in session, may fill the vacancies, or if said vacancy shall not then be filled, then any court of record may, upon petition of any person, fill said vacancy. A majority of said Trustees shall be members of the M. E. Church. The action of a majority of said Trustees shall be sufficient to make valid any contract within the scope hereof, said action to be in writing, signed by each of said majority. After three years the office of one of said Trustees shall become vacant

annually on the first Monday of June of each year, so that one vacancy may be filled each year, the order of vacancy to occur in the order in which the names first occur herein. Each Trustee shall hold office for six years after appointment as aforesaid. Unexpired terms shall be filled only for the unexpired part thereof.

Sixth, For any misappropriation of said funds, or conversion thereof, directly or indirectly, by permission or gross neglect or carelessness, the Trustee or Trustees blamable therefor shall be personally responsible to repay and make good the amount thereof, so that said fund may never be diminished, and so that the income thereof may be used as herein stated.

Seventh, Said Trustees, second parties herein, shall annually appoint five members of a Board of Regents, consisting of eleven persons. The other six of said Board of Regents shall be annually appointed by the Board of Directors of the University of Southern California aforesaid from their number. Said Regents shall hold office for one year and until their successors enter upon the discharge of their duties. Said Board of Regents shall have full power to manage and control the educational interests of said college, except as otherwise herein provided. The compensation of the President of the Faculty shall be not less than 10 per cent. on the first \$1000 net income, and 8 per cent. if \$2000 be the net income, and 6 per cent. if \$3000 be the net income; when the net income is \$4000 or over not less than 5 per cent. thereof shall be such compensation of said President, on the annual income.

Eighth, Said Regents of said college shall have no power to contract or incur any debts for or on behalf of said college, nor to make or cause any lien or incumbrance on any of the property thereof. They shall have the right of inspection into the accounts, books and records of said Trustees, and into the condition of said Endowment Fund and its securities, and the income thereof, and on behalf of said third party, may maintain any action necessary to preserve said fund as herein designed against said Trustees, or either of them, for any misappropriation or con-

version of said fund or any part thereof, or to prevent any such misappropriation or conversion, or to prevent any act that would so result. Any one or more of said Trustees, or any one or more of the Directors of the University of Southern California aforesaid, may in like manner inspect said accounts of said Trustees, or maintain any action necessary for the purpose of preserving and protecting said fund and the income thereof for the use and purposes herein intended.

Ninth, Said Trustees shall not receive as compensation for their services to exceed 5 per cent. of the annual income received. All expenses are to be kept down to the lowest reasonable amount.

Tenth, The University of Southern California shall by proper resolutions accept said college as "The Chaffey College of Agriculture of the University of Southern California" aforesaid, and shall have sole power to confer any and all degrees upon the graduates of said college and all its departments. It shall also establish the regular college course of study. The President of said University shall be *de facto* President of the Faculty of said College.

Eleventh, The College building hereinbefore referred to shall cost not less than \$10,000, and the furnishing not to exceed \$2000; provided, however, that either of said amounts may be increased from funds not belonging to said Endowment Fund.

[SEAL] GEO. CHAFFEY, JR.,

[SEAL] W. B. CHAFFEY,

By his attorney in fact,

[SEAL] GEO. CHAFFEY, JR.

Witness, R. M. Widney.

The undersigned, as Trustees, party of of the second part in and to the foregoing deed of trust, hereby accept the trust and enter upon the discharge of the same.

December 22, 1882.

A. M. HOUGH,

J. P. WIDNEY,

C. E. WHITE,

E. F. SPENCE,

G. D. COMPTON,

R. M. WIDNEY.

The University of Southern California hereby accepts the College herein provided for as the "Chaffey College of Agricul-

ture" of the "University of Southern California," at West Los Angeles, California, on the terms and conditions set out in the foregoing deed of trust.

In witness whereof, by resolution duly made, it has authorized its President and Secretary to sign hereto the corporate name and to affix their private seals, the corporation having adopted no seal.

December 22, 1882.

[SEAL] The University of Southern California.

[SEAL] E. F. SPENCE, President.

[SEAL] JOHN B. GREEN, Secretary.

The Board of Regents are Rev. J. B. Green, Rev. R. W. C. Farnsworth, Rev. Chas. Shelling, E. F. Spence, S. C. Hubbell, Hon. P. M. Green, Mr. L. S. Dyar, Mr. Geo. Chaffey, Jr., Mr. W. B. Chaffey, Rev. H. Simsabangh, D. D., President; Rev. S. J. Fleming, Secretary.

Questions Answered.

By R. M. Widney.

The residents of this part of the State are constantly pressed with various questions in form of letters from persons in other parts of the world. To answer these and many others, we will give in short paragraphs answers to such questions, omitting the questions.

CLIMATE.

In temperature, the extreme cold is a light white frost with a formation of ice about one-fourth to one-half inch thick in exposed, low, damp places. This cold is reached only on two or three nights in November or December; and again for two or three nights each in February and April.

Extreme cases occur in occasional years when the frost may be classed as a tolerably heavy frost. There are many choice, protected localities where frost never fall.

The strong and healthy never feel the need of a fire, summer or winter. Those in fair health prefer fire in the the winter evenings and on cold days. But in such cases the fire is a very moderate one.

Those who are sick will require more or less fire from December to May.

In the summer season the heat is such that nearly all persons wear light woolen



San Antonio Canyon Nine Miles from Mouth, showing San Antonio Creek.

garments. There is really no enervating heat here.

From April to November, dry, soft, balmy, clear weather, with a cooling, invigorating breeze from the ocean, soft as eider down. There are about four or five spells each year, called "hot spells," of three days each, which, in some cases reach six days. At such times the air is hot and dry, the thermometer in the shade reaching 96 degrees each day from about 11 A. M. to 3 P. M. These are followed by moist, refreshing currents of air.

RAINS.

Rains commence to fall here in November—consisting of one or two days rain. Then, usually, clear weather until about December 20th; then rains in spells of one to five days, alternating with clear days, until January 15th. Then short rain spells of from a few hours to a day until in March. Showers of rain on occasional days during March and April.

There are years called dry years, occurring once in about five years, with two dry years in succession, occurring once in ten to twenty years.

In these years the winter rainfall is from seven to ten inches. In good years the rainfall is about sixteen inches. A fall of twelve inches will give good crops.

Since the country has been cultivated the rainfall has perceptibly increased, and there is a fair prospect that the dry years will almost entirely disappear.

Los Angeles county has a frontage on the Pacific Ocean of nearly a hundred miles. On any part of this coast line small boats and lighters can land passengers or freight. The breakers reach a height generally of about 2 to 3 feet at low tide, and 4 to 6 feet at high tide.

No severe coast storms ever appear. In the last thirteen years only one or two small schooners have been driven on to the shore by winds, and no vessel has ever been sunk by a storm on the Los Angeles frontage. This ocean frontage is marked by an inland curved line bearing from N. W. to S. E.

WATER.

The water in running streams is soft water from the rain and snow fall on the

mountains. Some wells reach hard water, some reach soft water.

The cost of sinking a well, including 7-inch pipe, is (when not in stones) \$1.50 per foot for the first 100 feet; after that, 50 cents per foot extra is added to each new run of 50 feet.

In the Los Angeles valley there are about 300,000 acres of land, of a rich, sandy loam, where the water is from 5 to 12 feet from the surface. By cultivating the soil—keeping it free from weeds—the moisture will remain all the year within two inches of the surface.

All deciduous fruits do remarkably well on this class of land *without irrigation*. This land really needs no irrigation for all ordinary purposes. Artesian water is had on this land at a depth of 60 to 100 feet.

The next grade of land is rolling and table land, with the surface above the water level from 12 to 30 feet. This land is a warm, rich, sandy soil, free from all drawbacks except the occasional frosts. On it grow in tropical vigor the orange, lemon, lime and other citrus fruits.

The foothills embrace an area of some 300,000 acres. On this the surface is from 50 to 200 feet above water. With irrigation from the mountain streams it is the highest-priced land in the county.

Water right for irrigation is worth about \$20 per acre on the first class of lands above described. On the second class of lands the water right is worth about \$50 per acre; while on the third class of lands a water right is worth from \$75 to \$100 per acre. This is owing to the fact that the first class of lands need very little irrigation. The second class, by reason of frost, is somewhat limited in its products; while on the third class of lands, with water to irrigate, the yield of fruits is superior in quality.

The cost of rough lumber here is \$27 50 per M; rustic, \$45 per M; other lumber at corresponding rates. Hardware and all merchandise at San Francisco prices: these prices are the same as Eastern prices with freight here added.

Cost of living is very little different from prices ruling in the Northern States. The family cost for good, healthy food, including fruits and vegetables, per

grown person, cost of cooking, etc., is about \$3 per week. By addition of luxuries this cost can be increased to any extent.

House rent is at the rate of about \$4 *per room* for neat, hard finished, plain dwellings. More expensive and stylish houses and grounds rent at higher rates.

The cost of building neat, plain houses is about \$200 per room of 9x12 feet, and about \$250 per room of 12x14. Much cheaper houses can be erected, but they are classed as temporary dwellings, designed for future use as out-buildings.

Good horses cost an average price of \$50 for weights of less than 900 pounds. Horses weighing from 900 to 1100 pounds, cost from \$75 to \$150 or \$200. These are common laboring animals. Fancy stock costs more.

Good cows cost from \$40 to \$50; blooded dairy stock from \$75 to \$100; sheep cost from \$2 to \$3; hogs at 5 cents per pound.

All fruits sell at very profitable prices, for the producer.

The result of careful, judicious cultivation of agricultural or horticultural products is profitable, some products yielding a profit of \$50 per acre. The small profit is from grain crops; the large profit is from fruit crops.

In fruits one man can profitably cultivate and market twenty acres of land, leaving sufficient time to properly care for poultry and animals needed to use up ordinary fallings about the place.

All deciduous fruits, nuts and berries, and all semi-tropical fruits, do well here.

Farm help receives from \$20 to \$30 per month and board. Extra competent and careful men, who can do good, reliable work without having to be watched, can generally command from \$30 to \$40 per month. In a few words, all men are paid just about what they really earn.

This country is of such a character that each twenty-acre tract of our lands fit for cultivation, by proper cultivation and a capital of say \$2000 to \$3000, invested in improvements, will support and educate a family—not in extravagance, but with the comforts and necessities of life.

Those who possess a capital of from \$2000 up will do best here. All others will have as good a chance here as elsewhere,

except those who want public lands to settle on. Vast numbers of men came here with no capital who to-day are worth from \$4,000 to \$50,000; but they were men who were not afraid to work hard, early and late—who lived within their income and saved annually. For such there is still room.

In a commercial point of view, Los Angeles is probably second to none on this coast. All products here command San Francisco prices in the streets of Los Angeles.

A glance at the lines of transportation will show that this will probably be permanent.

The harbor of Wilmington, on the coast of this county, twenty-one miles by railroad from this city, furnishes facilities for shipping to all parts of the world.

Five lines of railroad radiate from Los Angeles City. One west, 16 miles, to Santa Monica harbor; one south, to Wilmington harbor; one southeast, 30 miles, to Orange; one east, through the vast mineral regions of Arizona, New Mexico and Colorado, connecting with the Southern railroads of the United States.

These lines in Los Angeles county run through the richest and most fertile land in the county. They bring produce to the city, and from there distribute it over the whole United States by railroad. Over the ocean sails any of our produce for which a foreign market makes a demand. Yearly cargoes of grain are transported to England and Europe.

All the religious denominations are well represented here, and either have or are securing suitable places for worship.

In educational matters there is a thorough system of graded public schools, culminating in a graded High School in this city. These schools are in constant and efficient operation.

The State appropriated \$50,000 with which to erect a branch State Normal School in this place, which is now completed and school in operation.

The University of Southern California has recently been started here. It is under the general care of the M. E. Conference, but it is undenominational and unsectarian in its instruction. Its object is to give a thorough intellectual, moral and physical

training to students of both sexes. The general doctrines of the Bible are inculcated as the sure and firm foundation of a moral character; but the dogmas and isms of denominations are treated as non-essential, and as being modes and forms, and not as principles.

Vineyards.

It may interest some to know something of the cost, as also the profits. Assuming that the land has been bought, starting with one-year-old vines, the total expenses for the first year would be per acre:

480 roots 1 year old, 2 cents each.....	\$13 00
Planting and care of same.....	30 00
Water for same.....	3 30
Staking and incidentals.....	10 00
Total.....	\$57 30
Labor and water, second year.....	25 00

Returns after two years:

Third year, 50 boxes per acre, at \$1.60.....	\$ 80 00
Fourth year, 150 boxes.....	240 00
Fifth year, 200 boxes.....	320 00
Sixth year, 250 boxes.....	400 00
Total.....	\$1,040 00

Thus in less than six years the balance sheet in ordinary circumstances would stand:

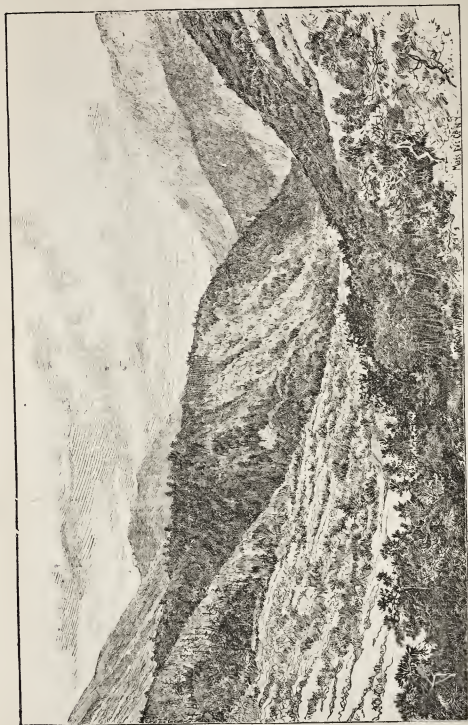
First year's expenses.....	\$ 37 10
Five years, \$25 per acre per year.....	125 00
Trays, sweat-boxes, etc.....	88 00
Expenses of picking, packing, etc.....	360 00
Total.....	\$610 10
Sale of raisins, six years.....	\$1,040 00
Total expenses, six years.....	620 10
Net profit, six years.....	\$419 90

The demand for the raisin is increasing in the United States and Canada much more rapidly than its production. In one form or another it is coming into daily use of some sixty millions of people. The grapes from which it can best be made grow successfully only within a limited area of the State of California. Therefore the varieties adapted to the purpose, the methods of cultivation and manufacture, are certainly worthy of the closest study and investigation by the people of those localities. It is only by these, accompanied by intelligent and thoroughly conducted experiments that the best results may be obtained, with the greatest certainty and at the least expense. Much has been written in regard to this important industry, but much more will be necessary before it can be said that all the

principles that govern the planting, cultivation and pruning of the raisin grape are thoroughly understood and practiced by our people.

LOCALITIES AND SOILS BEST ADAPTED TO RAISIN VINEYARDS.

Raisins of the first class can only be made from first-class grapes, and in localities where the high temperature and dry atmosphere will admit of their curing rapidly without the aid of artificial heat. To secure these advantages you must combine all the essentials of locality, soil and cultivation. It has been frequently said that "you can grow the raisin grape upon this coast from San Diego to Mt. Shasta," carrying the impression that a good raisin can be made wherever you can grow the grape. Experience is fast showing, and to the regret of many planters, that Muscat grapes for raisins can not be grown successfully in all localities with the wine grape, and that when grown the crop is frequently injured by rain and heavy fogs at the period of drying. The Muscat of Alexandria, from which our raisins are made, is a native of Northern Africa. It thrives best in a warm, dry climate, and in a rich, warm, well-drained soil. It is peculiarly sensitive to mildew and blight from a damp, cold atmosphere, especially at the period of blooming. When this occurs the berries as a rule fail to set; and when frequent showers and heavy fogs occur during the period of ripening the fruit is liable to mildew and decay. It is due principally to this excessive humidity of the atmosphere that it can not be grown in the southern portion of the United States. It is also true that this grape has succeeded fairly along the foothills bordering the coast, and upon low moist land in the interior valleys, but since 1876 we have had very dry seasons, especially in Southern California. Should a cycle of wet seasons occur, it will be found that mildew and rot will seriously damage if not totally destroy the crop of fruit in these localities. After the grape is grown it is very necessary, both on the score of economy in drying, and for the purpose of securing the best flavored raisin, to have as dry a climate as possible in which



"Hog's Back," San Antonio Canyon.

to cure the grape. A shower or two if followed by drying weather will not injure the quality, though it may injure the appearance of the raisin; but when the showers are followed by close, muggy weather there is certainty of the destruction of the crop by mold and decay. For these reasons the interior valleys of Southern California are the best locations, and the warm rich clay or gravelly loams, well drained, are the best soils. Eastern, southern and western exposures are the best, though as far south as Riverside a northern exposure will answer, but it will retard the ripening of the grape, which for raisin-making is a disadvantage.

IRRIGATION AND CULTIVATION.

Where irrigation is necessary with bearing vines, a thorough saturation of the soil before the buds start, and one when the fruit is about half-grown, are considered sufficient in the South of Europe and in Algiers to mature a good crop of grapes. More frequent irrigations than these produce a greater luxuriance of vine growth and what is known here as a second crop, which is secured at the material injury of the first, as well as the ultimate and serious injury of the vineyard. If we reflect upon the tons of vines that are produced each year upon the vineyards of Riverside and carted off and burned, the greater portion of which is unnecessary in perfecting a fair and profitable crop of fruit, we cannot fail to realize the immense drain upon the resources of the soil and its rapid depletion of the elements required for healthy, vigorous vines.

The Spanish raisin-maker is satisfied with a production of two to five pounds of grapes per vine, and finds a profit in his work. Is it not better to secure here a uniform crop of 20 to 25 pounds of first-class grapes that will ripen two weeks earlier than under our present system, that will not exhaust the soil as rapidly, and that will pay as well, if not better. One cultivator this season experimented with 190 vines, gave but two irrigations as described above, and abstained from summer pruning with the corn knife, and obtained more grapes without any second crop, but with larger and better clusters than under the other system.

The cultivation consists of one thorough plowing during the winter months, or at any time before the buds start, and as frequent cultivation thereafter as may be needed to keep the ground light and mellow and free from weeds.

It will be found beneficial to continue this cultivation until the grapes begin to ripen.

Ontario Picture.

The adjacent mountain ranges, which diversify the face of the country, tower above the snow line, and are crowned with the pure snow of the north lands. The sharp, keen air and picturesque trails, with romantic groves, grottoes, streams, and waterfalls, invite the more robust to climb into the pine forests that clothe the mountain's brow. From this lonely grandeur look, and look over the foothills, over the mesas, over the valleys, over the silver streams, and plains dotted with cities, villages, farms, and homes, on, on to the ocean, and on over the sea of silvery glass far away to the islands floating on the bosom of the quiet sea like monsters of the deep, and then on and on and back again over the green plains, seeking out the beauties of the loveliest panorama that human eye has ever gazed upon. Look upon it, study it, drink it in, compare it with everything you have ever seen, compare it to nothing you have ever seen. Behold it again and again until with awe and enthusiasm you exclaim, "Surely this is the paradise for man!" On the swift wings of sight travel the pictured land and sea o'er and o'er, and with tired joy you sigh, "I am satisfied."

Prices of Land.

Town lots at Ontario are now selling at \$125 per lot for corner lots, and \$100 per lot for inside lots. Villa lots inside the town plot \$250 per acre, and other lands in tract at from \$150 to \$200 per acre. Address Chaffey Brothers, Ontario, Cal., or Los Angeles, Cal.

We believe—no panic or calamity interposing—that in the next ten years it will be very difficult to buy any desirable lands with water, suitable for orange or raisin growing in Southern California, for less than \$1000 per acre.

THE ORANGE.

Citrus Fruit Culture in California.

By L. M. Holt, late Secretary of the Southern California Horticultural Society, and Editor of the *Riverside Press and Horticulturist*.

The American people, as a rule, before entering upon any business enterprise ask the question—

First—Will it pay?

And after arriving at an affirmative answer, they ask—

Second—How can the business be conducted so as to make it pay best?

Under the head of citrus fruits are classed the orange, lemon and lime. Whatever may be said regarding location and cultivation of the orange, will usually apply with equal force to the lemon and lime, except that as the lemon is tenderer than the orange, the latter will not stand so low a degree of temperature as the former.

The orange was introduced into California by the mission padres many years before the occupation of the country by Americans. They planted only a few trees, however, around the missions established by them in the southern portions of the State.

About forty years ago Wm. Wolfskill planted the large orchard of twenty acres in Los Angeles city, now extensively known as the Wolfskill orchard. This property is now managed by his son, J. W. Wolfskill, under whose control it has the reputation of being one of the best cared for orchards in the State.

At a little later date L. J. Rose and the late B. D. Wilson, of San Gabriel, planted orange groves, which have since become famous. Prior to the planting of these orchards it was known that Los Angeles would successfully grow the orange, but beyond the limits of that city everything was considered to a great extent experimental. The Rose and Wilson orchards soon brought to the front the reputation of San Gabriel oranges, and Los Angeles fruit took a secondary position in public estimation.

In the meantime experimental trees and orchards were planted in various parts of the Southern counties, which were more or less successful, according to the judgment used by the owners in securing

favorable locations and giving them proper cultivation. John Wolfskill planted quite an orchard in Solano county, and General G. M. Vallejo planted a small orchard in the Sonoma Valley, and in this way the seed of this industry was carried to Central California.

About twenty-five years ago Anson Van Leuven and others planted orange groves at Old San Bernardino, and the superiority of their fruit marked this locality as a favorite one for orange culture.

It was not until about the year 1870 that the orange fever spread in Southern California. About this time semi-tropical fruit nurseries were established, and young orange, lemon and lime trees were raised by the thousands. The San Francisco market was taking the fruits of the few orange groves already in bearing at prices which attracted public attention. From \$1000 per acre and upwards was being realized for the Wolfskill orange crop, and the production of oranges on this coast could not begin to supply the limited demand.

Upon the establishment of orange nurseries at Los Angeles and elsewhere, a more careful study of citrus fruit culture was commenced. Budding and grafting was resorted to to propagate the better varieties. Importations of the best varieties of oranges and lemons were made from foreign countries. The Navel was introduced to Los Angeles county from Australia, and has since become known as the Australian Navel. Another importation of the Navel was made to Riverside by L. C. Tibbetts from the Agricultural Department at Washington, which has been known as the Riverside or Washington Navel. These trees were imported from Bahia, Brazil, the home of the Navel, by the Agricultural Department.

Imports were also made from Rivers, of England, and Ellwanger & Barry, of Rochester, N. Y., and from Florida. Trees were also imported from Italy, China and other countries. By means of budding the nurserymen were soon able to place thousands of these choice varieties on the market at very remunerative prices.

Young orchards began to spring up all over the country. Men were led to be-

lieve that the "royal road to fortune" lay through an orange grove; that all that was necessary was to buy a piece of land, almost anywhere, buy from 1000 to 5000 trees at from \$1 to \$5 apiece, plant them, take care of them, and at the end of four years the income would pay for the entire investment, and leave the owner a property worth from \$3000 to \$5000 per acre.

To clinch this argument, the would-be orchardist was pointed to instances where men had successfully traveled this road.

At that time, 1870, much of this work was experimental, and many expensive experiments were tried. It was thought that there were fortunes in almonds and English walnuts, and many invested accordingly, only to be disappointed. A few locations successfully raised the English walnuts, and still fewer locations made the almond a paying investment.

Everybody went to raising orange trees, and the high price of the trees induced men to place everything in the shape of a tree on the market, whether it were good, bad or indifferent, and many of the latter class of trees found their way into orchards. Where thousands of trees were planted, but hundreds came into successful bearing and met the expectations of the owners.

THE ORANGE BELT.

There are three things it is necessary to consider in locating a piece of land on which to plant an orange orchard.

First—Water.

Second—The lowest temperature of winter must not be below 22 degrees above zero.

Third—The summer must have a prevailing dry atmosphere, and a temperature that has a maximum daily range of from 80 to 100 degrees above zero.

The question of water supply is an imperative one. It is not my intention at the present time to discuss the question of irrigation; that subject will receive attention hereafter. Some claim that trees should be irrigated every five or six weeks during summer; others claim that two or three irrigations are sufficient, and still others belong to Dr. Congar's school of horticulturists, who believe that in many localities no irrigation is necessary. These

theories will be discussed at the proper time; but whichever one is adopted, it is an absolute necessity to have water for use in case of emergency, in planting trees and getting them started, for extraordinary dry years, and for general use.

TEMPERATURE.

It is not sufficient that the average lowest temperature of a locality shall be sufficiently high; the average may be higher than the average of the most successful orange country in the world, and yet if the extreme lowest temperature of winter is below 22 degrees above zero it is almost fatal; and the less the temperature gets below freezing point the less damage there will be to young trees.

On the 30th of December, 1880, the cold wave which swept over Florida sent the mercury in many places down to 18 degrees above zero. The result was that many bearing orange orchards shed not only their leaves, but also the entire crop of fruit.

It will require much experience and the loss of much money and labor to ascertain the extent of country in which the orange can be successfully raised; and when this fact is once ascertained, and the map of California is marked off with isothermal lines which shall designate the boundaries of these localities within which the oranges can be grown, it will be found that inner lines must be drawn to mark the country that will successfully grow the lemon, and that the area that will grow the lemon will be much more circumscribed than that which will grow the orange.

CLIMATIC LIMITS OF THE ORANGE.

When a self-registering thermometer on a cold morning shows that the mercury has been down to 23 degrees above zero, the orchardist must expect to find all his younger lime trees in orchard killed to the ground. An orchard of large bearing lime trees will be badly killed, but many of the larger main branches will still be alive ready to put forth a new top when warm weather comes again. The bearing lemon trees will be but little hurt, although the smaller twigs may be cut back some, and if the tree is in bloom or has its fruit buds well developed the fruit crop for the

coming year will probably be lost, except a new crop of buds are put forth, which is frequently the case. Half-grown lemon trees will be badly killed in proportion to size, age, previous condition, etc., while the smaller trees will be dead beyond resurrection. Bearing orange trees will not be hurt, and except the freeze comes very late in the spring no damage will result to the crop; small orchard trees will be hurt but little, and only the very smallest trees will be killed, if on orange root; orange trees on lime, lemon, and China lemon roots are nearly as tender as the stock on which they grow. An orange tree on lime root will suffer nearly as much from the frost as the lime tree of the same size would have suffered. The same is true of the orange on lemon or China lemon. If it is a fact, as some claim, that the root does not affect the fruit of the bud, this one fact alone should condemn the lime, lemon and China lemon roots as stocks for budding the orange, except the trees are to be planted in a locality enjoying an almost entire immunity from severe frost.

The question of lemon on orange root is not so definitely settled, so far as injury from frost is concerned; but if there be any effect at all it would be for the better. But the only question in this connection is not how much cold will a tree live through. Cold weather affects the quality of the fruit. It causes a thick rind, a lack of juice, and in the lemon a lack of citric acid. Many localities will grow both the orange and the lemon tree if protected during the winter until they become quite large, and yet the fruit is of an inferior quality.

Very warm weather is absolutely essential to the raising of a good orange or lemon; the more warm weather a climate has the better will be the fruit. Hence a climate to produce citrus fruits in perfection, must not only not have an extreme low temperature below a certain point, but it must have a high average temperature also.

The climate of the State of California is warmer in the interior than on the coast; hence we find Riverside (San Bernardino) oranges quoted in the San Francisco

market from \$5 to \$10 per thousand higher than the Los Angeles oranges.

A DRY WARM ATMOSPHERE NECESSARY.

But the third thing necessary to a good location must not be lost sight of. The common brown scale and the black dust or fungus flourish in a cool, moist atmosphere, and can not be found in localities where a certain degree of dryness and heat prevail. The entire coast line from Oregon to Mexico, is visited very regularly by heavy fogs during the entire summer season. The fogs are less dense, and less frequent south of Point Conception than along the upper coast, and they diminish in frequency from that point southward. San Diego has less fogs than the Los Angeles coast, and the Los Angeles coast has less fogs than Santa Barbara. These fogs sweep inland from the ocean, but usually disappear a few miles back from the coast. The further inland one goes the less fogs he will find and the more warm weather.

The orange and lemon trees along the coast, and back for a few miles, are almost universally afflicted with both the common scale and the black fungus. The exceptions to this rule are rare. The further one goes toward the interior the less of those pests are to be found and the more clean trees.

At San Diego they have the scale and black dust but little, even on the coast, and back ten or fifteen miles it entirely disappears.

In Los Angeles county the coast valley is afflicted back to the range of hills, a distance of over twenty miles in some places. Back of this range of hills lies the San Gabriel valley, in which are located San Gabriel, Pasadena, Duarte and Azusa. This valley has less of the common scale than the coast valley, and yet many of the older orchards show a blackened foliage and fruit caused by black dust. The higher portions of this valley present trees with a cleaner appearance.

Still farther eastward is another large inland valley fifty miles long east and west by twenty-five miles wide north and south. In this valley are located Pomona, Cucamonga, San Bernardino, Riverside,

and other towns and settlements. In this large valley the atmosphere is so dry and warm in summer that the scale will not be found on one tree in a hundred, and the black fungus is unknown.

[Ontario is also located in this valley, four miles west of Cucamonga.]

Prof. J. H. Comstock, of the Agricultural Department, in 1880 visited the Pacific Coast to study insects injurious and beneficial to citrus fruits. He spent two or three months in Southern California, visiting various localities in pursuit of knowledge. While in Riverside he said to the writer: "I admire the valley and the beautiful clean orange groves; but I cannot remain here long, as a thorough examination of several orchards has convinced me that there are no insects here to employ my attention. I have traveled all through Florida and many parts of California; and this is the only valley I have found in the United States where the orange will grow without the scale. The trees here are marvelously clean, and the people here are to be congratulated."

This testimony is valuable because of its source. Prof. Comstock will find, however, that in traveling up and down the coast he will find a belt of country back from the coast where the scale will not grow. Within this belt, other things being equal, the choice oranges and lemons of the future will be grown.

In answering the question "Will it pay to grow the orange?" this question of location is an important one. It is a very serious question whether it will pay to plant orange orchards seriously affected with the scale. It is true that good cultivation will to a certain extent overcome the effects of the black fungus, as has been demonstrated by Mr. Wolfskill in his celebrated orchard, but as yet no process or management will overcome its evil effects. The safest course to be pursued is to seek a location that is free from both the scale and the fungus before commencing the work of planting an orchard. Such a location can easily be found; the examination of orchards of any given section will easily settle the question for that locality.

THE MARKET.

The question being settled that oranges can be raised successfully, the next ques-

tion arises is—Can the fruit be sold at remunerative prices?

Thus far San Francisco has been about the only market for California oranges. The result has been that any little surplus fruit has had a depressing effect on the price.

Prices during the past winter—1880-81—have reached a lower point than usual and yet good fruit brings a good price. A. J. Twogood, of Riverside, is selling his crop of 100,000 oranges at an average of \$30 per thousand. Fine, clean oranges grown within the true orange belt will command a good price, even though an inferior fungus-covered orange is a drag in the market at any price.

As yet the production of citrus fruits has not been sufficient in the State of California to supply home consumption, and millions of oranges have been imported from Mexico, Tahiti and Central America. The fruit from these localities is very much inferior to the choice California oranges. It is usually picked green of necessity and has an insipid flavor, in striking contrast with the highly flavored fruit grown in California.

Several causes have operated to force down the price of oranges in San Francisco during the past winter.

First—There has been an unusually large crop the past season, and thousands of young orange trees are now bearing for the first time. Riverside will market of the present crop about 750,000 oranges, as against 75,000 last season. Orange, Pasadena, Duarte and the new orange groves of San Gabriel report a similar increase. Hence the present crop is much in excess of any previous one.

Secondly—The winter in Central and Northern California has been unusually wet and cold, and hence there has not been the usual demand for this fruit; and,

Thirdly—The unusual floods blocked transportation, causing the fruit to accumulate in San Francisco.

New markets will soon be opened up for Southern California. The new southern railroad route, now completed, and the prospect for two or three other independent lines being finished to Southern California within the next two years, will furnish, it is hoped, cheap transportation

to the heart of the Mississippi Valley. These routes will enable us to find a market where millions of people will want our fruit.

[The market for oranges to the eastward has been successfully opened up, and new oranges are being shipped into the Territories and Western States by the car-load with profit. The orange crop of 1882-83 paid from \$1 50 to \$2 per box on the tree—150 to 200 oranges to the box.]

The California crop ripens from January to June, and ought not to be shipped at all before the first of March. At this season of the year the Florida crop is nearly or quite all gone, so that there will be no competition between the two States in this product.

The California crop of oranges is also placed in the Western market at a season of the year when damage from freezing is passed, and at a time when there is absolutely no fresh fruit to compete with it.

An orange orchard in full bearing will yield 100,000 oranges to the acre; \$5 per thousand will pay all the expenses of taking care of the orchard and packing and marketing the crop in San Francisco or any other market to which the freights are no greater. If the price should come down from the present figure to \$10 per thousand—jobbing rates—there will still be left \$5 per thousand or \$500 per acre for the producer, which, on a ten-acre tract, will satisfy the cupidity of the most avaricious. There is scarcely a possibility that the price of good clean oranges will reach so low a figure as \$10 per thousand yet for years to come.

WHAT WILL IT COST TO GET SUCH AN ORCHARD?

As a guide to those who may desire to figure on the probable expense of starting an orange orchard, I give below some figures which are applicable to Riverside: they must be changed somewhat for other localities. Land in Riverside settlement is comparatively high. One year ago good wild land could be obtained for \$75 per acre, and even at \$80 per acre under the canals. To-day there is none for sale at a less figure than \$150 per acre, and choice land in good locations is held at \$200 per acre, firm. Lower priced lands can be had

in other localities, and in no place in Southern California does it command as high a figure as here in Riverside. In applying these figures to other localities the price of land can be figured all the way from \$25 to \$200 per acre. Following are the figures for a ten-acre tract:

COST.

10 acres of land.....	\$1,500
1000 trees, budded or seedling.....	750
Planting and caring for same first season at \$30 per acre.....	300
Caring for orchard second year at \$25 per acre.....	250
Third year, \$25 per acre.....	250
Fourth year, \$25 per acre.....	250
Fifth year, \$25 per acre.....	250
Other expenses incidental to work, say.....	550
Total for 5 years.....	\$4,100
Interest on investment.....	1,200
Total.....	\$5,300

This is the expense account. There will be some receipts. If good budded trees are planted the third year will give a little fruit; the fourth year still more, and at the end of the fifth year there will be quite a fine crop. In order to be safe in these calculations we will place the yield and price at the lowest possible estimate:

Third year's crop, scattering oranges—a few hundred or a thousand—not counted.....	
Fourth year—an average of 50 oranges to the tree—50,000 oranges at \$10 per thousand.....	\$ 500
Fifth year—200 to the tree—200,000 oranges at \$10 per thousand.....	2,000

All persons planting orange orchards do not do as well as this, and some do better. Those figures represent what can be done with good judgment and thorough work. If a man thinks to save by getting cheap and incompetent work he may succeed in reducing the cost a few dollars, and the receipts a few hundred dollars, or even a few thousand dollars. If he buys a poor tree because he can get it for twenty cents instead of paying the market price for a good thrifty tree he will make another saving in cost of orchard, and in cost of boxes in which to ship the fruit.

Elevation above the ocean at Ontario at different points:

At Depot.....	960 feet
On Fourth street.....	1,053 feet
On Eighth street.....	1,178 feet
On Twelfth street.....	1,350 feet
On Sixteenth street.....	1,525 feet
On Twentieth street.....	1,680 feet
On Twenty-fourth street.....	1,850 feet
At mouth of canyon.....	2,125 feet

Ten Acres for Home and Profit.

BY C. F. PEASE, SAN BERNARDINO.

[The following Essay won the prize from the *Rural Californian*.]

I am going to give you a little of my experience in making a home for the benefit of others wishing to settle here. I came to this State about two years ago from Colorado. My means were limited, and I had to make a little money go as far as possible. So I rented a farm the first season, to learn as much about the surroundings as possible. This is a good plan; I would advise others to do the same. At the expiration of my year of renting I found I had means to buy ten acres at \$100 per acre, and to buy fencing, young trees, cuttings for vineyard, one horse and wagon, a few tools, such as plow, harrow, cultivator, hoe, rake, axe, etc., two good cows, twenty-five chickens, and lumber for a small barn, 16x30, with two sheds on the sides. That took about all my means—and no house. I built the barn myself, and concluded to live in it until I got able to build a house. The lumber for it cost about \$100. A hen-house I built of lumber, lath and shakes, 10x20 feet, in two rooms, and a shed for shade out of brush. A well was obtained with little cost by digging twelve feet. Two things I was very careful about selecting—good soil and plenty of water for irrigating. My family consists of a wife and three children, oldest aged nine years. They did not like the idea of living in a barn, but were willing to do it in consideration of the mild climate.

I put out mulberry and walnut trees along the lines of the road. The berries are excellent for chickens and the tops make good fuel. I put out three acres in raisin grapes, mostly of the Seedless Sultan; one acre in deciduous trees of all kinds adapted to this locality for family use; allotted one acre to house and barn, which I put out in shade trees, both ornamental and useful; three acres in alfalfa, and half an acre in strawberries and blackberries. That left me one and a half acres to cultivate. One acre I sowed in wheat, harvested it and planted it in corn, of which I raised two good crops for the

chickens. The half acre that was left I put into vegetables for family and market.

We have done all the work on the place ourselves, with the help of a hired man two months. I had to get into debt a little for provisions during the first three months. We have lived on our home one year this month, and kept an account of nearly all we sold and what we have paid out, so I can tell what, or nearly what, it has cost us to live. We feel very proud of what we have accomplished. We have had a great deal more than we have now, but were never so contented and happy before.

Our cows and chickens are now paying better than the first year, and we will make three to four times as much from them this year. The cows are feeding on green alfalfa. Only think of it, good green pasture up to the cows' eyes in December! This is the best dairy country I ever saw. Green feed the year around, and alfalfa at that—the finest forage plant in the world. The old settlers here don't seem to appreciate it as much as they should. I could not get along without my ever-green alfalfa. All kinds of fowls as well as stock devour it eagerly and fatten on it. But I am digressing.

I was going to say why the cows and chickens are going to pay better this coming year. We raised nearly one hundred pullets, and part of them are now laying and the rest will soon commence to lay. We have been selling twenty dozen of eggs per week for some time back. They sell at forty cents a dozen. The lowest we sold eggs at was twenty-five cents a dozen for a month or so last spring. The two cows are paying better and will continue to pay better than hitherto, because when I bought them one was farrow. She had a calf last October. The other one gave but little milk until last May. We now get four eight-quart-pailfuls a day, and after using all the cream and butter we want, sell from twelve to fourteen pounds of butter per week at forty cents a pound. Our neighbors say, "We don't see how it is you get so many eggs this time of the year, when we don't get hardly any; and your chickens all look so nice and healthy." "Yes," we tell them, "the fowls look well, and pay well, as they

lay about all the time except when we use them for sitting, as their record will show." There is no secret about it. Our neighbors' fowls would do just as well if they would take care of them as well. Ours are a mixed breed, Brown Leghorn predominating. Our chickens roost in a house that protects them from draughts and storms. They have plenty of nests made for them, such as they like, with a china nest egg. Their house is cleaned every week, and swept as carefully as a house floor. The floor is dirt, made hard and smooth, mud being plastered all over the bottom, then dried. The hen house is whitewashed every time it is cleaned, or sprinkled all over (nests also) with lime-wash. I slack about four quarts of lime in a pail with boiling water, and sprinkle it all over, using an old broom. We keep sour milk by them, and fresh water in their troughs. It pays me better to feed the sour milk to the chickens than to pigs and calves. I feed wheat in the morning, and corn, buckwheat or oats at night. About once a week they have a cooked dinner, composed of anything we have on hand, such as potatoes, squash, apples, beets, pepper or ginger, a little sulphur, cornmeal, scraps from the table, waste meat from a butcher shop—all well mixed and salted. We never have any sick chickens—lost only one during the year. Their door is closed every night so that nothing can disturb them. Plaster or lime and charcoal are put where they can help themselves. About sixty per cent. of the eggs we set hatched out. We sold nine dozen roosters when three-fourths grown for \$4.75 a dozen; have twelve left and one hundred hens, old and young. The chickens hatched in February and March, commenced laying in six or seven months, when eggs were bringing a good price. I have said a good deal about this little chicken business, but it is very profitable for the capital invested, and I will, no doubt, make enough out of it to support my family this year. What I make from my two cows and little farm will be so much towards building our house. Aside from what we use from the place, it costs us about one dollar a day to live here.

I sowed my alfalfa with barley, and cut

about nine tons of barley hay; cut the alfalfa three times, getting seven and a half tons, which is considered a good yield for the first year. I planted the three-acre vineyard in potatoes; then, after plowing them out the last time, about the 10th of June, I planted in squashes between the rows in every third row, so I got two fair crops from that piece. I had about twenty tons of squashes. In my one-acre orchard I sowed beets between the rows, and raised about twenty-five tons. I raised a few strawberries and had some to sell. One acre I sowed in wheat, cut it, and planted the same over in corn. I had two fair crops for the chickens. They do their own threshing and shelling. The half acre left I planted in vegetables—sweet corn, tomatoes, summer squash, melons, cucumbers, lettuce, etc. I should have mentioned while speaking of stock that I have some bees. I purchased three swarms; the increase was one swarm. We made vinegar from some of the honey, had what honey we wanted to use, and sold 150 pounds.

Now, we will figure up and see how much more than a living I have made this year:—

EGGS SOLD.

December.....	7 dozen	\$ 2 80
January.....	22 "	8 80
February.....	18 "	6 25
March.....	20 "	7 00
April.....	14 "	4 20
May.....	9 "	2 70
June.....	21 "	6 30
July.....	30 "	11 67
August.....	26 "	7 95
September.....	13 "	4 50
October.....	73 "	30 00
November.....	84 "	33 60

Total from eggs.....\$125 57

BUTTER SOLD.

December.....	\$11 20
January.....	9 80
February.....	11 00
March.....	5 63
April.....	4 20
May.....	5 10
June.....	8 20
July.....	3 25
August.....	4 30
September.....	4 70
October.....	7 80
November.....	21 60

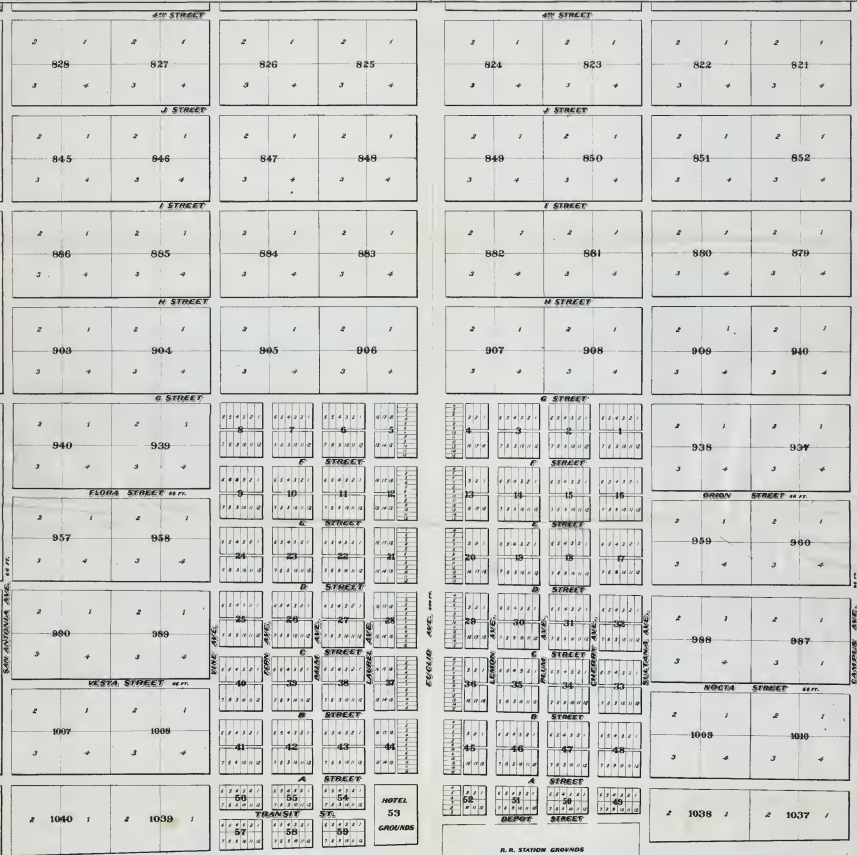
Total from butter.....\$98 88

Potatoes sold.....	\$207 40
Beets.....	30 00
Green corn.....	15 25
Summer squash.....	15 60
Green cucumbers and lettuce.....	12 40
Honey.....	10 92
Barley hay.....	45 00



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Squash.....	48 00
Strawberries.....	13 50
Tomatoes.....	36 00
Melons.....	12 85
Pickles.....	16 32
Onions.....	14 06
Two calves sold for.....	20 00
Nine dozen roosters.....	42 75
Add eighty-eight chickens more than I started with.....	44 00

Total amount of one year's sales.....\$366 30

If I take my living expenses, say \$365—a dollar a day for the year—out of this, it leaves \$501.50 saved toward building our house.

Now, if a man can do that well at the first, what can he do when his orchard and vineyard are yielding full crops, say \$250 per acre for raisins; say other fruits—strawberries, apricots, peaches, etc.—\$300 more, making \$1,050 to be added to the other products? The money received from my place was \$866.50; adding the possible return from fruits when in full bearing would make \$1,916.50. There need not be a failure of crops when water for irrigation is available.

A Health Resort.

[The following letter was published a few weeks since, but the demand for it has been so great that it is republished.—EDITOR.]

EDITOR FRUIT GROWER: During my present stay in this colony I have chanced to notice so many remarkable cases of improvement in certain diseases, that it seems a duty to others similarly afflicted to briefly enumerate a few. My readers will bear in mind that within the limits of Ontario there is a variation in altitude from 900 feet above sea level at the railroad station to 2,300 feet in San Antonio Canyon.

Mr. L. S. Dyar, a resident of Oregon for several years until a chronic lung trouble with hepatisation made a change of climate imperative. After a thorough search in several parts of this State, he finally decided on Ontario, and after a year's residence here considers his lungs fully restored. He will bring his family here and remain permanently. Altitude, 1050 feet.

Prof. A. G. Smith fought lung and throat troubles for years, one lung hepatised, had repeated and severe hemorrhages, and that peculiar hoarseness and

aphonia, indicating serious pulmonary disease. Says he has worn out four States. Came to Ontario three months ago in a worse condition than ever before; could endure no fatigue; could walk but a few steps, coughing constantly, etc. Has gained nearly twelve pounds, has had no more hemorrhages, cough all gone, except a little at night; is much stronger, voice nearly restored, can walk two miles, and is in high hopes of full recovery. Altitude, 1100 feet.

Mr. M. C. Buffington, of Burlington, Iowa, became completely disabled for work or business at home by throat and lung disease, indigestion and general debility. These culminated in or accompanied chronic asthma, for which he could get no perceptible relief. After a short stay in Ontario he began to improve, and though not yet well he works (or hunts) nearly every day; has raised a good crop within the year here, and is very much better in every respect. Altitude, 1500 feet.

Prof. Geo. R. Crowe, of Bloomington, Illinois, who had suffered severely from chronic catarrhal asthma and sciatic rheumatism for several years, after about a fortnight's stay in San Antonio Canyon, said his rheumatism was almost entirely gone, and his asthma was decidedly better in less than an hour.

Mr. W. M. Stoddard, of New Jersey, but for many years a resident of San Francisco and other parts of this State, says he cannot live anywhere outside of this same canyon. His complaint is asthma of long standing and of the severest type. Has lived in the canyon four years, and is there entirely free from the grip of his old enemy; but he says, "Let me go to Los Angeles and stay over night and I have it bad as ever." He is well content to remain in this canyon the rest of his life.

Col. W. H. May, another long-time sufferer from asthma, and who has tried several other places in vain, says San Antonio Canyon is the best place he has ever found, and has made a permanent location there.

Mr. J. W. Whittaker came to Ontario from San Francisco thirteen months ago, a terrible asthmatic sufferer, with all the

weakness, distress and debility which usually accompanies this disease in its worst form. He is now strong, in good flesh, working right along, even in the rain, and seems entirely cured.

Mr. J. B. Borthwick, of Pennsylvania, came to California for his health. Indigestion, sleeplessness, neuralgia and rheumatism were his ailments. Tried San Francisco and Oroville six months, but grew worse; then Los Angeles eighteen months with some improvement, but now after six months in Ontario experiences almost entire recovery.

I have seen and talked with these parties and have heard of several others whose cases are worthy of report—all going to establish the value of this especial portion of your State for climatic purposes. It is scarcely necessary to add that in this "model settlement" and immediate vicinity there is not the least indication of malaria. Hence the occurrence or existence of all that large family of diseases having this destructive element for their basis, and which is so fatally frequent in many places, can have no terrors here. Very respectfully,

DR. C. R. SYKES.

Ontario, Cal., Feb. 4, 1884.

Health at Ontario.

Situated near the Pacific Ocean shore, the air comes wafted across the seas for thousands of miles. Dashed by storms into the pure waters of the ocean, lifting the mists and spray high above, until every impurity is washed out, then warmed and dried in the sunshine, the air comes in fresh, pure and full of invigorating life. No deadly miasma nor germs of contagious disease can ever journey in the 'air from other lands to this. The sun pours its warm rays down through an ether of most delicate azure, filling one's soul with dreamy dreams of floating away into the depths of space, with feelings of most profound serenity and unconscious consciousness.

The sun baths of Ontario are unsurpassed by any that art has ever contrived. Public baths for the masses! Here they are for rich or poor, sick or well, old or young. Lie down on the rich grass and wild flowers in the full flood of sunshine,

lie and sleep, or dream of sleep, and feel the warm rays penetrating through and through, until, renewed with strength, you rise up from the accumulation of new strength and vigor, not as one rises from the sun bath of other lands, to shake with chills and burn with fever, in whom the sun's rays have but vitalized and caused to germinate the miasmatic spores that flow in his blood. The air and sunshine here are all that poetic glow has ever given to them in the Eden of the past or the El Dorado of the future. No pen, or tongue, or penciled brush can ever portray the exquisite radiant depth of azure blue, softened into a haze whose very haziness adds to its transparency, that fills the valley from mountain-top to mountain-top. Here no rigorous cold consumes the vital forces of the system, and no enervating heat prostrates the organs and stops the production of vitality.

Children who would languish and die for lack of vital strength in other lands, will here grow to health and strength. Adults whose systems are annually deteriorating, will here prolong in health and comfort the days of their sojourn.

Will the Fruit Market be Overdone?

A correspondent of the *Los Angeles Semi-Tropic Californian* thus discusses the question of overstocking the fruit market.

It is often asked, "Will the fruit business not be overdone?" You might as well ask, "Will there ever be too much bread and meat produced?" You would say "No," most emphatically. Bread and the meats are produced in every country; but how is it with the fruits that we produce in California? For instance, this is the place where the apricot grows to perfection. There are but few places in the world where the apricot grows at all, and even here in California it grows and does well only in certain localities. "And where is our market?" Everywhere in the civilized world. The demand increases faster than the supply for canned apricots. It is a matter of fact that the apricot is one of, if not the best, of fruits canned. It is sought after not only in our own country, but in Europe. Large quantities are sent to England and to all parts of the

world, and the cry comes for more. And for dried or evaporated apricots the demand is much more than can be produced for the next twenty years. The dried apricot can be kept or sent to market two, four or six months hence, and the freight is nominal compared to the freight on green fruits. And what is said about apricots can be said about other of our fruits—the French prune and nectarine. The nectarine does not do well only in portions of California. It is good for canning, and especially good for drying. The French prune is particularly good for drying, and always commands prices that pay the producer a good profit. Then the Bartlett pear is wanted to ship east to Chicago, St. Louis, and further east to New York, Philadelphia, Boston, and from these places to be distributed to almost every city and town in the United States. Then the demand for canned Bartlett pears is enormous, and the canneries want all the good Bartlett pears they can obtain; and the market for dried Bartlett pears is good. But other pears are wanted for shipping East at remunerative prices. Then certain varieties of peaches are wanted, and the canneries take all the good Early and Late Crawford, the Lemon Cling, Orange Cling, White Heath Cling, Salway, and a few other varieties of peaches. And still, notwithstanding that there are such large quantities of peaches canned, the demand is not supplied. Then for dried peaches the price is good. Mr. Hixson, of San Francisco, was a month in Los Angeles and San Bernardino counties trying to get three carloads of dried fruit, but all he could procure was 8,000 pounds. These two counties should have produced twenty carloads of dried fruit. Last, but not least, comes the apple. It is one of the fruits that is next to bread and meat. It can be used in so many ways that it cannot well be dispensed with. Everybody uses the apple in various ways—it is a part of the living. It is like all fruits, healthful.

Dried apples are used by almost every one, and evaporated apples command good prices in every market, and good green apples in San Francisco have been worth \$1.25 per box, wholesale, all summer and fall. "Why is it?" One reason, there is a great demand. A great many thousand boxes are exported to New Zealand, Australia, China, Japan and many other foreign countries.

THE MUSCAT GRAPE ON SOUTHERN MESAS.

Ontario Soil Analyzed---Better for Raisins than Wine---Choice Fruit Lands---Prof. E. W. Hilgard's Official Bulletin No. 17---Examination of Soil from Ontario Colony Collected by C. H. Dwinelle at the Head of Euclid Avenue.

Ontario occupies part of the slope at the base of the Cucamonga mountain, and originally formed part of the ranch of that name; it adjoins on the west the well-known Cucamonga vineyard. Euclid avenue is the central thoroughfare of the colony, rising for six miles from 950 feet at the southern end to 2200 feet at the northern, where it terminates against the foothills. The soil specimen examined is taken near the foothill slope, and therefore represents in a measure the debris and "wash" of these hills. It is noted that this soil, of which a belt runs along the foothills and part of the way down the slope, is sufficiently moist through the season to grow trees and vines with little or no irrigation—a circumstance doubtless due, in part at least, to the observed greater rainfall as compared with the lower portions of the tract, but probably also influenced by the seepage from the hills.

Unlike the usual mesa soils of the southern region this soil is of a blackish gray tint, due, as will be seen, to an unusually high percentage of humus. The surface soil to the depth of six inches is quite sandy and full of herbaceous roots, denoting a vigorous vegetation, and glistens with mica scales. Lower down it becomes more compact, and at the same time shows an increasing amount of rock fragments, and so it continues until at the depth of five feet the latter forms quite half or more of its mass, the finer portion remaining, however, of nearly the same dark grayish tint as at one foot depth. The rock fragments, all angular, consist mostly of schistose material, largely gneissoid. The analysis of the soil, taken to twelve inches depth, resulted as follows:

SOIL FROM ONTARIO COLONY.

Fine Earth.....	83.2 per cent.
Stones and Coarse Sand.....	16.8

ANALYSIS OF FINE EARTH.

Insoluble Matter.....	43.50	66.54
Soluble Silica.....	23.04	
Potash.....		1.58
Soda.....		.43
Lime.....		2.77
Magnesia.....		2.87
Br. Oxide of Manganese.....		.06
Peroxide of Iron.....		5.38
Alumina.....		14.20
Phosphoric Acid.....		.09
Sulphuric Acid.....		.04
Water and Organic Matter.....		5.33
		90.68
Humus.....		1.29
Available Inorganic.....		.42
Hygroscopic Moisture.....		4.44
Absorbed at — degrees C.....		12.00

From its composition this soil would naturally be conjectured to be that of a *ciénega*. Its potash percentage is extraordinary, exceeding that of any other California soil thus far examined; and with its relatively high amount of soda would arouse a suspicion of "alkali," if that were possible in a location and soil naturally so well drained. The extraordinary percentage of "soluble silica" explains the seeming anomaly in suggesting the innocuous combination in which these substances doubtless exist.

The lime and magnesia percentages are very high, as is, for that region, the item of humus; and that of phosphoric acid, while it would not generally be considered high, is so in comparison with other mesa soils of southern regions. Considering, in addition, its depth, this soil should be extremely productive — almost too much so for the production of high quality of wine grapes, but well adapted to that of raisins as well as of olives, and doubtless, from its location, to that of citrus fruits; all of which should in such a soil require one or two good winter irrigations to secure both quantity and quality.

Fruit and Raisins.

No article ever written in California, probably ever expressed a greater truth in a better shape and has been so widely published as the following from the pen of Prof. E. W. Hilgard:

"I don't think that any country on the American continent will ever compete with California for grape-growing and wine-making. In the raisin and wine industry, I do not think you will have any American competitors."

Abundance of Water.

The following certificate, issued pursuant to the water contract, shows the measure of water in the Ontario ditch, flowing in the lowest stage of water for the year. This would irrigate 6773.5 acres per month. By storing this supply during the eight months in the year when water is not used for irrigating, it will furnish water sufficient for nearly 20,000 acres. The Ontario lands, to which this water belongs, include less than 10,000 acres. It is also to be remembered that when this measurement was made not over half of the Ontario water was turned into the ditch:

OFFICE OF FRED EATON, HYDRAULIC }
ENGINEER, LOS ANGELES, CAL. }
July 19, 1884. }

This is to certify that on the 15th day of July, 1884, at 12 M. I measured the water flowing in the Ontario ditch at a weir placed in the waste gate at end of ditch, and found the quantity to be 13.25 cubic feet flowing per second. There was a mean velocity of 1.12 feet per second in the channel approaching weir, which was disregarded in the computation giving the above flow. Taking into account the head due to this approaching velocity, the flow would be 13.547 cubic feet per second, or 677.35 miners inches. FRED EATON.

More Improvements.

Since the tabulated statement of July was compiled buildings have been erected by the following land-owners:

A. Piddington, dwelling.....	\$ 5,000
T. S. Dowse, dwelling.....	3,000
Wm. Hall, dwelling.....	1,500
Miss Roberts, store.....	700
Edred Drew, store and dwelling.....	1,200
Jas. Newman, dwelling.....	500
W. J. Waddingham, grain warehouse.....	1,800
Thomas Holmes, barn.....	350
W. J. Waddingham, planing mill.....	1,000
I. W. Whittaker, dwelling and barn.....	1,000

Total.....\$16,050

Mr. Joseph Waddingham and Mr. L. S. Dyar have let contracts for two substantial cottage residences, which are to be erected immediately.

The brick for the college building at Ontario have been burned and work on the building, to cost \$20,000, has been commenced.

For purchase of college lands at Ontario address R. M. Widney, Los Angeles, Cal.

Found at Last.

There seems ever to have existed in the minds of men the belief that in some place on earth there was a spot which, in its rich and fascinating beauty, in its luxuriant and varied products, in its climate of soft, invigorating freshness laden with life and health, and in all that makes earth desirable, surpassed all other portions of earth's fair surface combined. Our oldest history tells us that man first awakened to life and consciousness in such a place, and calls it the Garden of Eden. The tradition of it has ever run down with the race as an inherited tradition, and the most fertile imaginations have ever painted the surpassing loveliness of a paradise on earth. Adventurers and explorers have pushed out into the dangers of the unknown region with anxious expectation, looking for the El Dorado, the Fountain of Youth—in vain, all in vain.

The Creator made the first garden of Eden. He was the husbandman and horticulturist of that favored place of which man proved unworthy. When man was driven from it the divine Gar-

dener ceased his care, and the streams that watered its vegetation ran in neglected courses, and for want of irrigation the beauties and fruits of the place relapsed into uncared-for wildness. Man must prepare and make the *second garden of Eden* by his own labor. He will then appreciate it. All that man can expect to find is the soil, climate, and natural facilities for re-making the garden of the Lord. Where is that place? We think it is here, Ontario. At least, if the re-making can not equal the work of that Master-workman and Artist, it can here become all that the limited power and knowledge of man can produce.

A Prophecy of 1835.

The United States might be expected to make no great way in civilization till they be fully peopled to the Pacific; and it might not be unreasonable to expect that when that event has occurred the greatest civilization of the territory will be found in the peninsula of California and the narrow strip of country beyond the rocky mountains.—*The Vestiges of Creation.*

W. J. WADDINGHAM, Architect and Builder, Ontario, Cal.

All kinds Rough and Dressed LUMBER constantly on hand. Cement, Plaster, Lime, and Earthenware Chimneys in Stock.

Mill Work and fine Indoor Work a Specialty.

GO TO

Waddingham's Grain Warehouse and Feed Mills on Depot Block, Ontario, if you wish to store grain or buy feed.

SMITH & MOORES,

LIVERY & BOARDING STABLE,

A STREET, ONTARIO, CAL.

VISITORS to the Celebrated San Antonio Canyon should get Conveyances here. The roads from other points to the Canyon are not to be compared with the Euclid Avenue drive. Parties met at Ontario Depot at all S. P. R. R. trains.

GEORGE McINTYRE,

Contractor and Builder.

Shop on Euclid Avenue, next door to the Boarding House,
ONTARIO, CAL.

Plans and Specifications drawn up at short notice.

NEW
FURNITURE AND UNDERTAKING
WAREHOUSES,
At - - - Ontario, - - - Cal.

E. DREW HAS ERECTED A NEW AND SUITABLE BUILDING ON EUCLID Avenue, and is now laying in a large and well-selected stock of Furniture, Carpets, Matting, Wall Paper, etc.—all bought in the best markets—and is prepared to sell as low as the lowest. He would invite the inspection of the surrounding public and solicit their patronage, as he is satisfied that he can make it an object for them to buy, as he will not be undersold.

Agent for Pianos, Organs and Sewing Machines. Also prepared to Contract for Buildings. Plans and Specifications furnished at shortest notice.

October 3d, 1884.

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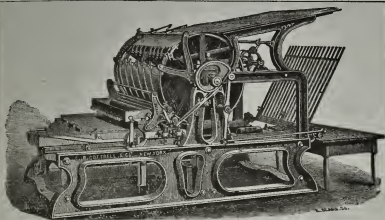
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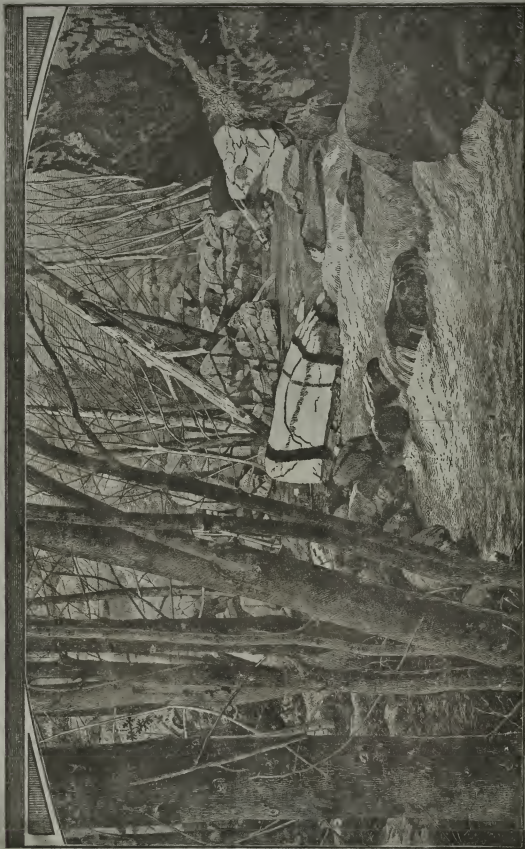
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